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General Scientific

ARE ACQUIRED CHARACTERS HEREDITARY?

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That characteristics acquired by the parent are transmitted to descendants has been an accepted axiom for many years, and until recent times few investigators have challenged the accuracy of this doctrine. Lamarck's theory of progressive transformation of all forms of life through the effects of use and disuse assumes that results produced on the parent organism during lifetime are handed down to the offspring, and that they accumulate in ever-increasing ratio in successive generations. Darwin, although he based his theory of organic evolution on natural selection, upheld the Lamarckian principle to some extent as a factor in the evolutionary process, and his hypothesis of pangenesis was mainly conceived with the idea of explaining the method by which modifications undergone by the parent through environmental changes could be transmitted to the germ-cells, and thus lead to their inheritance by the next generation. But no hypothetical explanation of the inheritance of acquired characters, however ingenious or plausible, constitutes proof that such inheritance actually occurs.

Sir Francis Galton was probably the first of modern biologists who refused to believe the evidence in favor of use-inheritance, and a few years later August Weismann expressed his conviction that the long-accepted doctrine of the transmission of acquired characters from one generation to another is fallacious. He has ever since been the leader of the neo-Darwinian school of biology which, disregarding altogether the effect of acquired characters upon the evolution of species, finds the explanation of organic changes exclusively in natural selection and other collateral agencies.

Before discussing the subject of use-inheritance, it is desirable to define what constitutes an acquired character, for "acquired" in the biological sense is not synonymous with "new." "Acquired" characters are modifications of the body due to environmental or functional changes not inherent in the germ. They are what Weismann calls "somatic modifications in contradistinction to germinal variations," the latter being variations which arise in the germ, through causes which are often very obscure. Of such acquirements there are, of course, many well-known instances, either due to environmental effects, as the sun-burned skin of man, or the result of use and disuse, a familiar example being the well-developed arm of the blacksmith. In practice, however, it is not always easy to determine in individual cases whether a given character arises from the body (somatogenic) or from the germ (blastogenic). Moreover, it is not practicable for an adherent of Weismann to prove that a given character is not inherited, for, as is well recognized, a negative cannot logically be proved in any case.

The controversy, therefore, turns upon this point. The instances adduced in favor of the contention of the inheritance of acquired characters must be examined, each on its own merit. So long as it can be shown that another explanation of these cases is possible, they necessarily fail as evidence in support of the theory of use-inheritance. The difficulty is to find cases "where the occurrence of selection, natural or artificial, can be wholly excluded."

It has been argued with an apparent show of truth that if acquired characters are not inheritable, then the whole elaborate fabric of organic evolution falls to the ground, as there would be no means by which the original one-celled organisms could have changed and assumed new forms leading to the more complex and higher stages of life. In addition experiments have been made which indicate that cultures of micro-organisms may, under changed conditions, undergo transformations which are maintained through a series of generations, although the inducing conditions may for a long time have ceased. The fact is that unicellular organisms are modified under the direct influence of the environment, but the inheritance of such modifications is not comparable with that in multicellular forms of life. The change which occurs in the whole body of the unicellular organism is naturally transmitted to the next generation, because this is nothing more than the mother-organism divided into two halves—soma as well as nucleus. There is no differentiation between body and germ cell. A metazoon derived by a series of cell divisions from a single cell is strictly comparable, not to one generation of one-celled forms of life, but to a number of such generations. The process of inheritance involved is, therefore, a different one. While there is inheritance of acquired characters in unicellular life, this proves nothing when multicellular organisms are concerned. In the case of one-celled organisms, body and germ being one, acquired characters are at the same time inborn characters; both kinds of inheritance, somatogenic and blastogenic, are not differentiated.

When first the problem of the inheritance or non-inheritance of acquired traits was discussed, it was the custom on the

affirmative side to quote cases of mutilations which were said to have been transmitted. A cat or dog had accidentally lost part of its tail, and had later given birth to tailless progeny. Some writers believed that these alleged instances of inherited mutilations constituted incontrovertible proof of the truth of their arguments, but careful investigation has shown that none of their cases could stand scientific examination. Even where mutilation has been practised for many generations, as in circumcision, no permanent effect has resulted. Non-Jewish boys are occasionally born with a short prepuce, as are Jewish boys. As circumcision and similar mutilations produce no constitutional disturbance, transmission of such conditions is most improbable, and their employment as evidence of use-inheritance indicates great weakness in the argument presented by the original upholders of the doctrine of the inheritance of acquired characters. To-day, however, they seldom refer to this aspect of their case. Weismann cut off the tails of mice for generations without achieving so much as a short tail. The only experiments in favor of the positive assertion are the well-known ones by Brown-Séquard on guinea-pigs. By severing certain nervous tracts in these animals, he produced pathological changes, such as epilepsy, paralysis, etc., which in a small percentage of cases reappeared in the offspring. These experiments have been repeated by Mr. Leonard Hill, of University College, London, with considerable care, buf the results have not been apparent in the offspring. Further, Brown-Séquard's cases are not sufficiently distinctive to afford anything approaching proof.

There is considerable confusion between congenital traits and inherited characters. The terms "congenital" and "inherited" are often used as if their meaning was identical. A character may be present at birth (congenital) and yet may not be inherited. As every vertebrated animal begins its independent existence from the moment that the parental germ-cells unite in the act of fertilization, anything which happens to the fertilized ovum after that moment as a consequence of influences external to it must be considered an acquired character. Congenital modifications are often acquirements occurring in utero. The mere act of birth cannot and does not alter the organic relationship between body-cells and germ-cells of any individual. In fact, inborn traits which are blastogenic, due to arrested development of the germ, such as hare-lip, are far from uncommon; and on the other hand, defects, malnutrition, etc., caused by disturbances within the uterus are not rare phenomena, and are probably the result of some abnormal condition of the mother.

The hunting instincts of dogs have been put forward to show that the effects of use are inherited. It has been found that young dogs are born with traits which are said to have been acquired by their parents, and it is also said that these traits can be intensified in successive generations. But even here matters are not as simple as they at first appear. Only certain breeds of dogs are fit for definite domestic purposes, showing that there is an innate disposition in the different breeds of dogs for certain kinds of training, which, of course, can be improved in each individual by constant practice. These hunting qualities being natural variations in certain breeds of dogs, and being merely directed toward certain requirements of the trainer, are, of course, inherited. The traditional fact that constant improvement in successive generations takes place, may easily be due to artificial selection, for dog-fanciers breed only from their best dogs. This is the method employed by all breeders for the improvement of their stock, and applies as much to hunting qualities as to other points.

There are numerous factors—the effects usually attributed to the influence of civilized life—which are believed to furnish strong evidence for the positive school. The late Mr. Herbert Spencer referred at some length to the myopia of the studious city dwellers in Germany; the small hands, jaws and teeth of modern man; the thick soles of the feet, which are already distinct in newly-born infants. According to the neo-Lamarckian school of biology, all of these are features acquired as an outcome of modern life, and are passed on to the next generation. But the same argument applies as before. The characters are, without doubt, inherited, but are they acquired? As present-day competition does not depend so much upon physical excellence of eye, hand or jaw, as upon intellectual qualities, the individuals with defective eyes, smaller jaws, etc., would have as much chance of surviving as their superiors, which in itself would lead to a greater number of progeny of that type. Or, to put the facts in another way, germinal variations in the form of myopia, small jaws, etc., not being detrimental in the struggle for life, would not any longer be gradually weeded out. What Weismann calls panmixia would ensue; that is, deterioration would begin and would continue with the aid of germinal selection, until, overstepping the limit, and becoming dangerous to the individual, natural selection would come in as a check. The dwindling of the little toe in civilized man has been attributed to the wearing of shoes, but as the same condition has been found in tribes which do not wear shoes, this dwindling must be attributed to a natural tendency of the little toe to become smaller—that is, to germinal variation.

It is said that on account of the unhealthy conditions in which slum-dwellers work and live, the physique of some city workers in factories is deteriorating. There is no reasonable doubt that slum life has a most deleterious influence on the individual, but there is no reliable evidence that this bad result is passed on to the next generation. There is nothing to show that the children of the slums, if removed when quite young to healthy surroundings, would not grow up perfectly sound and normal. First, children of the slums are subjected from their birth to the same unhealthy conditions of existence as their parents; second, the state of the mother, who is sometimes both underfed and overworked, is likely to have an injurious influence on the child, even before birth. Congenital weakness is in such cases the result of intra-uterine under-development, due to insufficient nourishment, and is not a result of any inherent defect of the germ.

It has often been argued that races of men living in different latitudes are what they are on account of the climatic conditions in which they live. Climatic conditions unquestionably have some effect on the organism, but there is no proof that these are inherited. Suppose we turn the argument around—only such races survive in certain regions as can acclimatize themselves to the surrounding conditions. Abundant evidence can be brought forward in support of this contention. We know that white men have some difficulty in surviving in certain climates, although the black races thrive in the same regions. In a few words, when a character is inherited it does not follow that it was acquired in the first instance. So long as such cases can be explained in this manner, they cannot be one-sidedly used as evidence in favor of the transmission of acquired characters.

"There is no such thing as inherited smallpox, inherited tuberculosis or hereditary syphilis." (Quotation from Professor Adami's article upon *Inheritance and Disease* in *Osler's System of Medicine*, 1907, Vol. I, p. 22.)

It is impossible for there to be inheritance proper of any infectious disease. The only conditions which are capable of being inherited are conditions which have told upon and modified the nuclear material of the germ cells of either parent prior to or at the moment of fusion. Any influence acting upon and modifying the new individual after the moment of fusion is something acquired by what is already a separate entity. Congenital syphilis is, unfortunately, very common. Hereditary syphilis does not exist. An infection of the germ has nothing to do with heredity.

MULTIPLE RUPTURE OF THE KIDNEY BY EXTERNAL VIOLENCE.

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The following case is deemed to present features sufficiently rare to merit recording:

About 5.30 P. M. February 22, 1912, Sergeant A. B. was reported over the telephone to have been injured by falling from a train, a few minutes previously, at the trestle near Highlands, N. J.

A non-commissioned officer and ambulance were sent to bring him to the hospital, where he arrived about 6 P. M., suffering from great pain and shock.

It seems that he had been blown from the platform of a passenger car, while crossing the trestle, and had fallen, probably a distance of twelve or fifteen feet, striking on the ice.

This unusual accident happened while the man was looking for his cap, which had blown off on a previous trip the same day, in that locality, and occurred while the train was running at probably twenty miles an hour, but in a terrific gale of wind which was reported by the New York papers at 110 miles an hour during the day, and of greater velocity by vessels off Sandy Hook. With what force the man struck the frozen ground and ice can therefore be imagined.

He was immediately taken to the dressing room, and his injuries examined. A Potts fracture of the right leg, contusions of the back and left thigh were discovered. During the examination the patient complained bitterly of his distress, which he placed entirely in his back and it was only with difficulty that his agitation permitted examination or treatment.

Slightly less than a half grain of morphia was given hypodermatically during the procedure and this afforded but partial relief. During this time there was a slight flutter of the radial pulse, which at no time could be counted, and the man was pale and cold, and evidently suffering from severe shock. Aromatic spirits of ammonia and whiskey were administered and he was kept well covered and surrounded with hot bottles, without appreciable benefit.

As soon as the fracture could be reduced and properly splinted he was put to bed.

No injury of the skull or brain could be found and all symptoms seemed referable to some internal injury, probably abdominal.

Partial relief and quiet appeared after a third quarter of morphia had been injected; but no other improvement appeared, and he died at 2.25 A. M. the next day.

February 23, post mortem 10 a. m. The body was that of a very large and well developed man, apparently in the best of health before death.

Rigor mortis was marked. Suggillation was very marked in all dependent portions of the body, so much so that it suggested a direct hemorrhage into the tissues.

Examination of the chest revealed slight pleural adhesions near the apex of the left lung, and a fracture of the 11th. rib near the angle, with a small amount of bloody fluid in the left pleural cavity. The heart and vessels were uninjured.

A large doughy mass could be felt through the diaphragm in the left hypochondriac and lumbar regions.

On opening the abdominal cavity an immense hæmatoma could be seen through the intestinal folds, behind the parietal peritoneum and adjacent to the kidney, and there was some bloody serum in the abdomen.

The mass of blood, apparently about 2,000 c.c., pushed the peritoneum forward and inward, and completely engulfed the kidney. On opening this semi-clotted blood mass the kidney was found torn almost completely through from pelvis to cortex; the major fragments being held together by a bridge of tissue in the interior, and there were smaller lacerations extending from the main one. The emerging veins were badly lacerated, and the kidney structure was reduced to pulp where the greatest force was expended.

The other kidney and spleen were normal; slight injury had occurred to the pancreas. No vertebral injury had occurred, and the rupture of the kidney appeared due to force transmitted through the soft parts of the back directly to the kidney as the man's body struck the ice in its flight from the moving car.

The excessive restlessness and agitation of the patient were probably due to the agonizing pain caused by the stretching and compression of the nerve filaments in the post-peritoneal tissues; and the lack of response to morphine to the deficient absorption from hemorrhagic lack of circulation.

THE DIETETIC AND MECHANICAL TREATMENT OF CONSTIPATION, WITH INSTRUCTIONS FOR LAYMEN.

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After practicing medicine for fifteen years, the last few of which have been more especially devoted to the treatment of stomach and intestinal diseases, I have arrived at the conclusion that of all the ailments the physician is called upon to treat constipation is one of the most difficult to cure. This would not be so if we could keep our patient interested in a rational treatment, but it is well nigh impossible to do this so long as there are no other symptoms present to worry him. The relief he so quickly experiences by the use of the various laxatives, and their convenience, are sufficient to cause him to delay earnest attempts at a cure, until his trouble has reached the stage where drug taking is an established habit or he is practically an invalid. I have found that patients listen willingly when the treatment for this condition is described to them, but they soon forget the essential points. Most people, educated as well as the others, have a great respect for printed statements. Taking advantage of this trait in human nature, I have put together in booklet form, all the facts that I consider necessary for such patients to know, together with diet lists and blank spaces for special diet or exercises. I have found that the scheme works admirably. Instead of spending valuable time instructing the patient, I give him the booklet to read at his leisure. While it is only a collection of well-known facts that I have observed in my practice or have borrowed from the writings of Herz, Cohnheim, Boas and others, and rather badly expressed, I have patients who have learned it by heart and it seems to have been a comfort and help to many of them. The following is a copy of the original text:

Constipation or costiveness is an abnormal condition, brought about in most cases by irregular habits, improper food and a sedentary mode of life. There are, in some cases, other factors that are responsible, but these are of interest to or can be understood only by the trained physician. In every case, before any treatment is instituted, the patient should submit to an examination by his physican and be guided by his advice throughout the treatment.

As diet and exercise play such an important part in the treatment of the ailment, and as it is difficult and sometimes impossible in the time limits of an office visit to instruct the patient in the technique of the treatment, I have put together the following rules and lists for his guidance. Before taking these up, however, it will be necessary to explain some of the principles involved.

In the mouth, the teeth, tongue, muscles of the cheek and the saliva convert the food into a suitable condition to be swallowed and, in addition, certain parts of the food are here changed chemically; hence the necessity for not only thoroughly chewing, but for allowing the food to remain sufficiently long

in the mouth for this important change to take place. If this is neglected, the brunt of this work falls on the intestine, and if continued for a long time, often results in irreparable damage.

After it is swallowed, the food passes through the œsophagus (gullet) into the stomach. Here it remains, according to its character, for from one to four or more hours, to be churned up and digested. When this process is completed, it is emptied into the small intestine, where it is subjected to more digestion of a different kind, and where the nutritious parts are absorbed into the economy for its maintenance, and the waste, or part not used, is passed along into the colon (large intestine) to be stored up here until it is finally passed from the body in the act of defecation. The feces, as the contents of the colon are called, consist not only of the waste portions of the food; in addition, we find here the burnt-up materials that the liver and other glands have collected from the blood, which are not only of no further use, but poisonous if too long retained.

The small intestine is a tube about twenty feet long. Its walls are made up largely of muscle fibres placed in such a manner that when they contract or relax they cause the intestine to contract or dilate. It is the contracting of these muscles, one after another, much as the fingers are worked in cow milking, that propels the contents along. The rhythmical rise and fall of the diaphragm in breathing and the irregular movements of the abdominal muscles also aid in propelling. Nearly every motion of the body makes some demand on these abdominal muscles, which in turn squeeze and massage the intestine with its contents. It can readily be seen from this how a sedentary mode of life is conducive to costiveness.

When the feces have accumulated in the colon to a certain amount, they are slowly passed along to the lower portion of that tube, called the rectum, the walls of which are normally very sensitive to pressure or irritating material. It is on this sensitiveness of the rectal walls that we depend for the call to defecate. If this call is habitually disregarded for reasons, such as press of business, false modesty or laziness, the rectum soon loses its sensitiveness. When the feces first reach the rectum they are normally quite soft, but every hour that they remain in the body after this, water is withdrawn from them until finally they become so hard and dry that they are passed only by straining or artificial help. Not only is the sensitiveness of the rectum impaired by the contant presence of hard and dry feces, but the muscular tone and strength are soon lost because of the constant stretching of the part, resulting finally in loss of ability to expel the feces unaided.

From what has been said above, it can be seen that the character of the food has much to do with the rapidity with which the bowels act. In playing the game of "tug-of-war," one would not select a rope of small size if a large one about which the fingers could get a good hold were available. We can apply the same principle to the work the intestine has to perform. If the food that is taken in is deficient in bulky waste, the muscles in the intestinal wall find it difficult to grasp the contents in their efforts to push it along. It is essential, therefore to eat largely of those foods that are rich in cellulose (fiber). It is not necessary to take of this character of food to the exclusion of the other kinds, as the nutrition would thereby suffer; but with each meal some articles rich in waste should be eaten. In the list prepared, I have placed the foods of this character. In it will be found some things that, while they are not particularly rich in waste, are valuable because they are chemically laxative. This is true of some of the fruits and fruit juices and honey. Following the laxative foods will be found a list of those that have the opposite effect, either because they are deficient in bulky material or are chemically constipating.

There are many people who suffer from constipation because they eat too little of any kind of food. This is particularly true of those who diet in an effort to reduce superfluous fat.

The regular drinking of cold (not iced) water should be encouraged. This is necessary to supply the feces with the required moisture. At the same time, the cold water stimulates the peristaltic motion of the stomach and intestines, especially if taken on an empty stomach.

Besides the regulating of the diet, there are other conditions to put right. The most important of these is the time selected to empty the bowels. This is normally in the morning soon after breakfast. The stomach having been empty all night is most sensitive in the morning, and cold water drunk on arising acts as a strong stimulant to peristalsis, and following this, the exercise of dressing and the warm breakfast increase this effect. It requires from thirty to forty hours for the food to pass through the entire digestive canal; thus it is that in the morning some of the food of the previous day, with the evening dinner or supper of the day before that, is in the colon waiting to be expelled.

No engagement should interfere with this most important duty. Ample toilet facilities should be arranged in every home, school or business place. Parents should personally see that their children visit the toilet at a regular time. Teachers should realize the importance of promptly granting the requests of pupils to leave the room and employers of labor should make provision to have their employees relieved on request. The toilet room should be well ventilated and comfortably heated. For children or those of short stature a footstool should be arranged for the feet to rest upon, as when the thighs are somewhat bent upon the body the abdominal muscles are reenforced, giving them more force to expel.

The question of exercise is an important one, as most of the cases are in those who do not exercise regularly. It is a mistake to think that ordinary walking will do much good in this respect. Brisk walking in the fresh air is one of the best forms of exercise we have for improving the general tone and health, but in itself it is not sufficient. We can, however, supply the necessary exercise in a manner that is neither irksome nor time-consuming. If one can spend five minutes regularly each morning on arising, after first drinking one or two large glasses of cold water, he will do much to improve the bowel function. The best exercise for this purpose is to lie flat on the back on the floor, holding both hands with the fingers intertwined on the top of the head and the feet placed under a chair or other piece of furniture, then slowly rising to a sitting position and then lying flat again, repeating this performance at first two or three times, and later, when the muscles are strengthened, going through with it ten or twelve times. The regular army "setting up" exercises are very useful indeed, particularly those in which the body is bent over in stooping without bending the knees and that one in which the trunk is twisted around so that the shoulders are at right angles to the hips. During the day one or two minutes can be profitably spent in going through a few of these motions. Walking up stairs slowly, two steps at a time, is recommended highly. Regularity in taking exercise is much more important than the amount indulged in. A few minutes spent several times a day will do more good than an hour all at one time.

Massage in a few cases is beneficial, but to be of any lasting good must be taken daily for several months and it should be given only by a competent operator. This is beyond the means of the average person. A substitute, which is in most cases quite as efficacious, is the rolling about the abdomen of a six or eight-pound cannon ball, or a hollow wooden ball filled with bird shot to make it sufficiently heavy. The ball is placed on the right side of the abdomen just below the border of the ribs. From here it is rolled across to the corresponding position on the left side, then down that side to the hip bone and

across to the right side and up on that side to the starting point, this circuit being made about ten times, after which the ball should be rolled back and forth, up and down, over the center of the abdomen several times. Massage, or the above-described automassage, should not be used without the permission of a physician who has made an examination of the abdominal organs, as serious injury might result. It should be taken preferably in the morning before dressing.

A cold morning bath following the exercise is a powerful stimulant to peristalsis. When this is not possible, or when such baths are not well tolerated, the slapping of the abdomen with a towel wet with cold water will be found invigorating and beneficial.

An ailment that has existed in most cases for years cannot be cured in a few weeks. In fact there are few patients so thoroughly cured that they can return to the mode of living which in the first place caused the trouble.

Among the causes of constipation, should be mentioned the effect of the habitual taking of laxative medicines. This is such an important matter that I have left it until the last in order to more forcefully emphasize the seriousness of the practice. Every time in chronic constipation a laxative is taken without professional advice, the patient is weakening his intestinal function. The muscles are degenerated because their work is done for them, and the nerves that have to do with regulating the peristaltic motion, becoming used to the powerful stimulating drugs, refuse to respond to the normal stimulating effect of the food, and as they become accustomed to one powerful drug after another, finally reach the paralyzed condition we find in complete constipation. In starting with the treatment here outlined, the patient should make up his mind to stop all such dosing. He must understand that every dose of laxative medicine that he takes is putting his recovery back and defeating all his efforts at dieting and exercise. The bulky diet is given to re-educate the intestines as well as to make it easier for them to act, and the loose, watery evacuations, the result of cathartics, are certainly not the kind to accomplish this result if they were not otherwise undesirable. The excessive use of alcohol is to be condemned, especially the drinking even moderately of the red wines and brandy. While the smoking of a good cigar after breakfast is laxative to many who enjoy the weed, excessive use of tobacco is injurious in constipation because of its depressing effect on the nerves of the body generally and to some extent on those of the intestines.

Foods Permitted in Constipation.

Those printed in italics are particularly valuable, either because they are rich in waste material or are chemically laxative.

Soups.—Plain meat broths, thick, well-cooked vegetable soups, clam or oyster soup.

Fish.—Any fresh fish, raw oysters or clams.

Meats.—Most fresh, tender meats, bacon, boiled ham, thoroughly cooked tripe, poultry and game.

Farinaceous.—*Bran bread, gems* or *biscuits, whole wheat bread, graham bread, Boston brown bread, corn bread, rye bread, graham and oatmeal crackers, oatmeal, Pettijohn,* mush. (All cereals to be taken with cream or milk, butter and a little sugar.)

Vegetables.—*Spinach, cabbage, Brussels sprouts, sauerkraut, beet tops* and *all greens, tomatoes* raw or cooked, *green corn, string or butter beans, peas,* asparagus, *cucumber, celery* raw or cooked, *oyster plant, parsnips, beets,* carrots, turnips, squash, *artichoke,* cauliflower, *lettuce, water cress, cole-slaw, olives,* baked potatoes.

Fruits.—*Baked* or *raw apples,* all kinds of *stewed fruit, oranges* and *orange juice, peaches, apricots, grapes* and grape juice, *cherries, plums, prunes,* cantaloupe, *figs, dates,* raisins, gooseberries, huckleberries, all preserved fruits, *marmalades* and *honey,* rhubarb.

Salads.—All *plain salads* with much oil in the dressing, the various *combination salads* in which there are vegetables, or fruits in large proportion.

Desserts.—*Fruit pudding, fig pudding, apple charlotte, cut-up oranges* with shredded cocoanut and a little sugar, home-made cookies, fruit gelatines with cream, bread pudding made with raisins and currants.

Beverages. A great deal of plain *cold water* between meals, lemonade, orangeade made from the fresh fruit, raspberry juice in water, unfermented grape juice, *new sweet cider,* buttermilk, kumiss and matzoon, dekafa.

Of all these articles bran bread is perhaps the most valuable for our purpose in that it supplies not only a great deal of bulk, but is also very stimulating to the peristaltic action of the intestines. Some of it should be eaten with at least two meals each day. It can be made at home from the ordinary bran bought at the feed stores. The following recipe will be found a satisfactory one:

Two cups of bran, one-third of a cup of ordinary flour, one egg, two tablespoonfuls of molasses, one and a half cupfuls of milk, one and a half teaspoonfuls of bicarbonate of soda (baking soda), salt.

Foods Forbidden in Constipation.

Salted, potted, preserved or smoked meats, fish or pork (excepting ham and bacon), fresh pork, duck, dark meats of fowls, liver, brains, sweetbreads, an excess of eggs or milk, sugar, candies, pastry, nuts, cheese, new white bread or biscuits, griddle cakes, toast, crackers, baked beans, rice, tapioca, macaroni, spaghetti, sago, rich stews, blackberries, gravies, creamed soups, rich made dishes, most chafing-dish products, pepper, spices, curries, mustard, soda water fountain drinks, tea, cocoa, malted milk, ginger ale, spirits generally, especially brandy and the red wines, heavy beers and ales, cordials.

A Specimen Schedule for Twenty-four Hours.

To be modified according to the requirements, taste or finances of the individual but to be followed persistently as to time, regularity and the principle of the bulky diet.

Upon Arising.—A glass or two of cold water, followed by five minutes' exercise; this to be followed either by a cold bath or the slapping of the abdomen with a towel wet with cold water. Dress.

Breakfast.—A baked apple with cream, a large saucer of oatmeal with cream, a little butter and sugar, a soft-boiled, poached or scrambled egg with or without bacon, several pieces of bran bread and butter, a cup of coffee with cream and a little sugar, marmalade or honey; for those who smoke, a mild cigar.

Fifteen Minutes After Breakfast.—Visit the toilet whether the desire to do so is felt or not.

One Hour After Breakfast.—Drink a glass of cold water.

Lunch (for a business man).—Cold chicken or ham, any kind of a salad (excepting potato), rye or brown bread and butter, a baked apple with cream, a glass of buttermilk or sweet cider. (A cheaper one.) A rye bread ham sandwich, a baked or raw apple, a glass of buttermilk. (For those at home.) Cold meats, warmed-over vegetables, jam or preserves, with bran, whole wheat, graham or rye bread and butter, a glass of buttermilk or sweet cider.

One Hour After Lunch.—Drink a glass of cold water.

At Three or Four O'Clock.—Take five minutes' exercise.

Dinner.—Some clear soup or thick vegetable soup, a roast, steak or chops, two or three kinds of vegetables, a salad with plenty of oil in the dressing, fruit pudding or oranges cut up, plain cookies, bread and butter as for lunch.

One Hour After Dinner.—A glass of cold water.

At Bed-Time.—Three minutes' exercise, and if the visit to the toilet in the morning was not satisfactory, go there again at this time.

Alcohol Antidote.

Ammonium chloride is recommended as an antidote to alcohol, given in doses of 30 to 60 grains, with copious draughts of water to prevent gastro-intestinal irritation. It prevents the effects of the alcohol, sobers the patient quickly, and is a valuable preventive against delirium tremens. Should the patient not become quiet after taking the remedy, bromide or chloral hydrate may be administered.

Correction

On page 184 of the June issue of THE TIMES the Oppenheim prescription for use in Subacute Rheumatism should read:

Chloral Hydrate
Potassium Bromide ..... aa 3i
Syrup Codein (1:500) 3i
Water ..... q. s. ad. 3iv
M. Sig. One tablespoonful at night.

THE VALUE OF GELSEMIUM.

WILLIAM F. WAUGH, A. M., M. D.
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Chicago.

Well it is for the world that all men do not think alike and believe alike. Uniformity is stagnation. The conflict of wits makes for mutual enlightenment.

Two sets of men take up the consideration of a medicinal plant, the lovely yellow jessamine. One set takes the plant, administers it as a whole, observes the effects following, and employs it thereafter whenever the assemblage of symptoms appears which this plant seems to relieve. A true and useful method, with correct results following accurate and repeated observations.

Another set of men studies the plant from its effects on animals and human beings in health, and determines just what the plant actually does, what functions of the body it affects, whether it stimulates or sedates them. A true method, leading to correct results when applied intelligently and read aright.

Both methods being proper, and assuming that they are applied correctly, should the results be identical? Not necessarily, for in each there lies a fallacy. The assemblage of symptoms in two or more cases may appear identical to the clinical observer, and yet spring from different causes, and pathologic conditions, requiring different treatment. And the remedy that exerts a certain action in a state of health may not display a similar power when administered in disease. Evidently each method requires the other, to complete and explain the results noted by each. Only a narrow and prejudiced mind will refuse to admit this, and ignore all but his own part.

The result of dependence upon clinical observation exclusively is a hopeless, endless, inextricable confusion. Take as an example the case of echinacea. Many clinicians have asserted its exceeding value in certain septic states, and Lloyd has given it the sanction of his great name. But, when administered in health it has not been found to exert any appreciable influence; and a writer in a recent periodical (I haven't the number at hand now) states that he has not been able to detect any effect whatever when the drug is given clinically.

It is just such contradictions that have led so many to throw drugs away in disgust, as everything about them seems to rest on opinion and nothing on proof. Under these circumstances, all one can do is to state the truth as he sees it, and leave to his brethren the privilege of assimilating that truth to their own stock.

Studying gelsemium from my own viewpoint, I find that its influence over sick or well is undoubted—it surely does something. Its activity depends on the presence of two active principles, gelsemine and gelseminine. The former is a stimulant resembling strychnine; the latter a sedative resembling cicutine. The effects of the plant, and of the whole-plant preparations, depend on the quantity of each alkaloid that may be present, and this differs under the conditions of the plant's development, as to heat, moisture, sunshine, soil, season, climate, etc. We may have a gelsemium rich in one alkaloid and poor in the other, one with very much of either, or scarcely a trace. Since the two are antagonistic, it follows that the effects of different plants must vary over the whole scale from pure stimulation to pure sedation. Since gelseminine usually predominates, the effect of gelsemium is usually sedative. But this alkaloid, like all relaxants, gets quickly to work and is rapidly eliminated. The sedation is evident within a quarter-hour, and begins to subside within an hour. Gelsemine, like all contractors, is slower in action but more persistent. We may, therefore, see in a child poisoned by jessamine, a perilous collapse occur soon, from which the child recovers to die in convulsions from the slowly developing action of gelsemine.

Insofar as these two are antagonistic, the effects of gelsemium are those of the stronger, minus those of the weaker, complicated by the different periods of their activity. These difficulties the manufacturing chemist seeks to obviate, by so treating the plant as to secure a preparation that will exert an activity uniform in kind and degree. This he can only do by regulating at a fixed standard the quantity of each of the active principles present.

But at what point? Shall he leave out the gelsemine and give us the pure sedation of gelseminine? That is what the alkaloidist does, and better, for his alkaloid in granules of milk sugar remains unchanged for many years, while not even the genius of a Lloyd can prevent alcohol and water from evaporating, or heat and sunlight from effecting a molecular change, by which the proportions of alkaloid in a fluid are altered. Nor can he, after selling tinctures to ten thousand doctors, prevent some hundreds of them leaving the corks loose, or setting the bottles on shelves next the hot chimney, or in the sun's rays; and manufacturers must count on ignorance and carelessness in a percentage of customers.

Or, shall he leave a certain proportion of each alkaloid in the preparation? But what proportion? The combination that suits one case may not suit the next; for though the action of identical doses of pure medicinal singles is identical, the reaction of patients with them is not. The dose of gelsemine for one may prove too exciting for another; as for instance, if the latter has chordee, where gelseminine is invaluable and gelsemine most objectionable.

We say, give us each by itself, and we can administer either alone or mix them in proportions to suit our cases. The best the chemist can do is to supply a mixture that will meet the most needs; supplying the separate alkaloids enables us to meet all needs.

But, it may be said, gelsemium contains other activities besides the two described, and we lose these if we do not use the whole plant. Very well—what are they? What do they do? Does anybody know? Can anybody say if and how they aid or retard the action of either of the known agencies in the plant? If not, I decline to use them. One might as well gather up a handful of the dirt in which the plant grows, and give it to the patient on the chance that maybe it might contain something of use.

Medicine has outgrown that stage. The day of mystery, superstition, ignorance, chance, is past. We know something now, of the physiology of the human body, of its pathology, of the real action of drugs. We know enough of these to base on them a practice more successful than any that has preceded it, because this is based on knowledge and not on chance. The doctor who does not realize the truth and the importance of this, is simply ignorant of the advances made in the study of drugs during the past quarter-century, and in the correlation of those studies with the like advances in physiology, pathology and kindred sciences.

It is not merely a question of gelseminine or gelsemium, but of the simplification of practice; of the rescue of therapeutics from the uncertainties of the past, and placing it on the solid basis of known, comprehensible truth. At last we may apply Cullen's dictum of single remedies, because at last we possess single remedies of known powers, that may be directed accurately to meet recognized defects in the organic functionation.

Removal of Silver Nitrate Stains.

The following combination will immediately remove the stains on the skin left by nitrate of silver:

℞ Hydrargyri bichloridi .....aa ʒj
Ammonii chloridi
Potassii bromidi .....ʒss
M. Sig.: Rub on the skin.

Dental caries attacks the large majority of children between the ages of six and fifteen years.

NEOSALVARSAN.*

DR. E. SCHREIBER,
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The very latest publications show us what a powerful weapon we have in Salvarsan for syphilis, especially when it is given in combination with mercury. The unpleasant collateral effects which appear in its employment may be for the greatest part definitely avoided by careful fixation of the indication and equally careful regulation of the dose. Prof. Ehrlich has devoted much time to the improvement of Salvarsan as will be seen when we note that since evolving Salvarsan the laboratory number of which is 606, he has labored until he has worked out Neosalvarsan, which bears the laboratory number 914.

Neosalvarsan is a true derivative of Salvarsan, and is formed, according to Ehrlich, through a condensation of formaldehyde sulphoxylate of sodium ($CH_2(OH)O.SO.Na$) with Salvarsan. The peculiarity of the sodium salt to pair with chlorhydrates of various bases was already known. The reaction follows the scheme: $R-NH_2 + HO-CH_2O-SONa = R-NH-CH_2OSO-Na + H_2O$.

Neosalvarsan is a yellowish powder, like Salvarsan, over which, however, it possesses the great advantage of being easily soluble in water. In addition the solution is completely neutral, so that it is unnecessary to neutralize it with soda lye as heretofore. I am of the firm conviction that many of the unpleasant collateral effects observed in the employment of old Salvarsan are to be set down to the account of the soda lye. The latter does not readily keep sterile, and further it has been established that instead of the required normal soda lye, the concentration has often been otherwise; and that even in some cases potash lye, ammonia and even methyl alcohol have been furnished. Hence we should greet with especial joy the fact that soda lye may now be dispensed with.

Since October, 1911, we have been working with Neosalvarsan, which is much less toxic than old Salvarsan, and we find that 1.5 gram Neosalvarsan corresponds to 1.0 gram of the old substance. Our toxicologic researches by Dr. Kersten, show that the dosis tolerata for the rabbit amounts to 0.2 gram as compared with 0.08 gram of Salvarsan.

The question naturally arose, whether with lessening in toxicity the preparation had not lost in therapeutic efficacy, but researches instituted by Ehrlich showed that Neosalvarsan was in all instances more active than the old preparation.

At first we used Neosalvarsan in combination with the old, later entirely alone. We have now made in all about 1200 injections in 230 patients. Part of these were muscular, part intravenous, but finally we used it solely intravenously.

In preparing the intravenous solution we pour the product directly from the ampule into fresh distilled sterile water, shake a few times gently, and we then have a solution ready for use. Vigorous shaking is to be avoided because oxidation may thereby readily take place. In order to prevent this it is advisable to prepare the solution just before use. I point out expressly that in employing saline solution to prepare solutions of Neosalvarsan, we should use only the weaker concentrations up to 0.4 per cent. because if stronger concentrations are added, cloudiness readily arises. The substance also seems to be more toxic in high concentrations. Solutions which stand a long time, and in fact the substance by itself when enclosed in tubes which are not airtight, take on a reddish hue. We used for solutions water at room temperature, at the most 20° C. (68° F.). I have recently pointed out that even with old Salvarsan cool solutions are better borne than warm. If we dissolve from 0.6 gm. to 1.5 gm. in 200 to 250 c.c. water, this solution is hypotonic, and one sees as a result a slight discoloration of the blood and hemolysis, nevertheless the solution is diffused so quickly into the blood stream that no scruples need be entertained as to the relationship. An isotonic solution would result from a concentration of 0.8:22.

In regard to the dosage, men of moderate robustness bear 1.5 gm., women 1.2 gm. smoothly. It is evident that one will do well not to start out with such high doses, but with about 0.9 gm. for men and 0.75 gm. for women, to be increased according to indication until the full dose is reached. Children take 0.15 gm. and nurslings 0.05 gm. Proceeding from the idea to introduce the largest possible doses at the outset, we have of late repeated the injections with but one day interval, after about the following method: 1st day, 0.9 gm.; 2nd day, nothing; 3rd day, 1.2 gm.; 5th day, 1.35 gm.; 7th day, 1.5 gm. In very robust men we have given 1.5 gm. at the outset and in each dose, so that during 7 days 6.0 gm. of Neosalvarsan (equal to 4.0 gm. old Salvarsan) were given. It is evident that with individuals of weaker constitution these doses must be reduced still further. In particular I would like to emphasize that caution is required in the case of patients who complain of headache or any other nervous symptoms whatever, or who have any pronounced cerebral phenomena, for probably such patients have furnished the greatest number of accidents from old Salvarsan, and no doubt with improper dosage the same thing could befall the new substance. In all such cases one must feel his way with the smallest practicable doses.

Clinical results are as prompt with new as with old Salvarsan. At times we received the impression that the phenomena receded even more rapidly under the new remedy. For example in one case we found no spirochetes present four hours after the injection. In 24 hours there were none to be found. Still we excise the chancre whenever possible. Success was also obtained with Neosalvarsan in other affections—such as stomatitis, angina due to the streptothrix, etc.

The collateral phenomena with Neosalvarsan were with our dosage decidedly less than those with old Salvarsan. We saw gastroenteric disturbances very rarely. Of the greatest advantage, doubtless, is the absolutely neutral reaction of the solution, as a result of which burdensome infiltrations no longer occur. (These were formerly attributed to unsuccessful injections). The patients no longer complain of the burning pains of the injection.

The temperature rise following the use of Neosalvarsan occurs only in typical fashion i. e., only in cases with an abundance of spirochetes after the first injection. This begins a few hours after the first injection in characteristic fashion, to subside again within a few hours. In these cases even the usual complaints of headache, etc., are slight. All other elevations of temperature, such as may accompany second and third infections may be set down to bacterial impurities. To exclude the initial rise, one may either begin with minute doses or inaugurate the treatment with mercury; but in adopting either of these courses we have to renounce the therapeutic value of the so-called *ictus immunisatorius* of Ehrlich. We have never seen injury of any organs but with the largest doses we have at time noticed harmless medicinal rashes, which as a rule appear from the eighth to the twelfth day. By cautious dosage these may also be avoided. One woman patient interested us in that she showed a rash from Neosalvarsan, and another later from mercury. For repeated tests with the Wassermann reaction, only 97 patients were available, because the doses first used were too small, while the observation period was too short. Of this number 61 gave negative, 36 positive results. Of the negative results one-third continued negative for 14 days. Five were negative for 4 months and 7 for 3 months. To the latter belong 3 cases of early chancre.

Abstracted for the MEDICAL TIMES from the *Münchener Med. Wochenschrift*, 1912, No. 17.

Provisionally we so arranged our method of treatment that at first we made 4 injections and 14 days after the last one made the Wassermann test. If this is negative we repeat and test every four weeks, so that if a change to positive appears, an energetic mercurial treatment may be begun at once. After the latter is completed we give two injections of Neosalvarsan. Which of the preparations of mercury should be used can not be decided off-hand. We have seen equally good results follow an inunction cure and a course of mergal or calomel injections. The main requirement is that a mercurial cure be carried out vigorously. In tertiary cases it is of advantage to administer iodide of potassium in conjunction with mercurials. Either iodoglidine or iodostarin is well borne. We urgently advise excision of the chancre in every case. In all strict adherence to these cures, we must so proceed as to avoid neurorelapse; fortunately we have not yet seen this accident under Neosalvarsan.

The contraindications coincide completely with those laid down for old Salvarsan.

A few words may be devoted to intramuscular injections. As a result of the absolutely neutral reaction, the local irritation is notably less than with old Salvarsan, but the injection must be actually intramuscular. We have convinced ourselves by animal experiment that the local alterations are essentially slighter than when the old preparation is used. Furthermore Neosalvarsan is much more rapidly absorbed. It is recommended that the solution be made in the concentration of 1.5:20. In order to antagonize the initial pain of the injection, we have often added 5 c.c. of a ½ per cent. solution of Novocain. The needle used thereby is then left in situ for the Neosalvarsan injection which is to be made a few minutes later. Notable infiltrate formations or necrosis we have never seen. Perhaps in the first few days there may be an elastic edema which is not sensitive and promptly subsides. Researches made with oil emulsion show no advantages over the ordinary kind. We urgently object to subcutaneous injections.

The advantages of Neosalvarsan are in brief as follows:

1. It is more readily soluble and has an absolutely neutral reaction.
2. It is better borne and can be given in larger doses.
3. Its therapeutic activity is at least as great as that of Salvarsan.
4. It is better adapted to intramuscular injection.

COMPLICATIONS, SEQUELAE AND TREATMENT OF TRACHOMA.*

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One of the most dreaded complications of trachoma is pannus trachomatosus, on account of the permanent injury caused to the eye. Pannus is a new formation of vascular tissue on the surface of the cornea. It forms near the limbus and progresses toward its center. The cornea becomes translucent and finally opaque, so that the vision becomes limited to distinguishing large objects. More often it is the upper half of the cornea that is involved on account of the friction of the tarsal conjunctiva on the former. In very severe cases the inflammation extends to the iris and an iritis results.

Ulcers of the cornea may develop and progress to such a degree as to cause scars and permanent opacities. The latter impair the vision more or less according to their situation. Besides these objective symptoms, we find the patient suffering with pain, photophobia, lacrymation and blepharospasms.

Very grave results of pannus are staphyloma, and a Keraectasia e panno, a softening and bulging of the cornea due to the intra-ocular pressure. It is needless to say that in these cases the vision is completely destroyed. Symblepharon, one of the many sequelæ, is an adhesion of the bulbar and palpebral conjunctivæ due to the inflammatory process.

Trichiasis, another sequela, is an irregular growth of eye lashes, mostly toward the eye and thereby causing continual irritation.

Other sequelæ are entropion, an inward turning, and ectropion, an outward turning of the eyelid. These conditions are produced by cicatrisation of the mucous membrane of the conjunctiva, mainly by the thickening of the tarsal cartilage. If the scar formation is very extensive, the glands of the mucous membrane are obliterated, the secretion checked and a dryness or xerosis is the final result.

The treatment of pannus consists in removing the cause, that is the diseased membrane, either by an operation or by its repeated scarification. I use atropine for rest and protection of the deeper parts of the eye, and applications of hot water. If there is much discharge present I employ a silver salt followed by saline. Other remedies are copper sulphate, tannic acid, alum, and bi-chloride of mercury. The patient is instructed to wear smoked glasses and to keep away from bright light, wind, smoke and dust. If the pannus is of long standing and the cornea has lost its translucency, we try to produce an inflammation by the instillation of jequirity infusion.

The radical operation for the very bad cases is the so-called Heisrath Kunth operation. This operation has for its object the total removal of the thickened, distorted tarsal cartilage and the overlying mucous membrane, so that the lid is left soft and plastic and exerts no pressure on the underlying eye. In severe cases it is necessary to remove the cartilages of both the upper and lower lids. The procedure is as follows:

The upper lid is everted upon itself so as to expose the fornix. An incision is made parallel to the upper border of the tarsal cartilage. A second semicircular incision is made as close to the edge of the lid as possible and with its ends joining the ends of the first incision. These incisions extend down to but not through the underlying muscle. The tarsal cartilage and its overlying mucous membrane are then dissected off completely. The exposed area is covered by dissecting up the remaining mucous membrane, drawing it down and uniting it by sutures to cover the whole of the denuded surface. In order to hold the sutures they are drawn in mattress fashion through the lid and anchored by small masses of gauze, so that the sutures do not cut through the lid.

The same technic is employed for the lower lid, but in this case no sutures are inserted.

Ulcers of the cornea are treated the same as pannus, but we do not apply copper sulphate. For trichiasis the treatment consists in epilation of the offending eyelashes or plastic surgical operations of various kinds. For entropion and ectropion a variety of plastic methods are available. Very little can be effected for symblepharon by operation.

Xerosis is incurable. The only thing we can do is to use palliative measures, such as the various emollient and soothing oils, glycerine, ɪl. ricini, mucilago, etc.

*Read before 15th annual convention of the Am. Medico-Pharmaceutical League, May 27, 1912.

In acute cardiac affections a patient needs from 2,500 to 3,000 calories in his food; more if his appetite requires it and less if his digestion is bad. The care of the bowels is important. The medicinal treatment should be directed mainly to the cause of the heart involvement and here the salicylates are depended on, combined with alkalies. The local measures, cold, heat and local irritation, can be used and will suffice in most first attacks of rheumatic endocarditis. In later attacks cardiac tonics may be required to meet cardiac insufficiency and digitalis is the most reliable of these, unless it be strophanthus.

A TRIO OF MORAL IMBECILES.

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To not a few of the general public the term, "Moral Imbecile," if familiar at all, is associated only with the notorious criminal; nor do many realize that there is a class of human beings born into the world as destitute of the moral sense as are the blind of the physical sense of sight. Without any inherent restraining force, dominated by an insatiable ego, forever craving presentation and recognition, their one desire is excitement and self-exploitation.

The means of attainment is wholly indifferent to them, as crime and criminal propensities have for them no meaning, and even its penalties do not affright, if only they may gratify the ruling passion, to them the basic principle of life. But may one not find in many humans a flame of passion or sin, often well-hidden, waiting only for the first provocation to burst forth, or with consummate duplicity playing a dual personality? Dr. Jekyll and Mr. Hyde are not creatures of mere fancy!

The poet and the artist, with quickened vision, sometimes attain a conclusion which the scientist, in the study of means and signs of cause and effect, must reach only by arduous and laborious journeyings.

Psychologic and physiologic science have of late persistently presented facts which now the legal profession is accepting, and strives to demonstrate—viz., that there does exist a dangerous class, skilled transgressors of law, yet exempt from its penalties, incapable of comprehending what constitutes crime; innocent, therefore, because irresponsible.

The cases presented are not of the baser criminal type, but belong rather to what are known in the "under world" as the "slick ones;" those who prey on a credulous society and who, with a little more brain-power, would prove veritable artists in crime.

In each case there is not only absence of will-power to combat wrong impulses, but also a decided mental defect preventing their own recognition of these impulses, coupled with a childish delight in seeing what they can accomplish. Indeed there are frequent lapses into veritable childishness, although they are far from being guileless children.

Esther,* a Jewess, aged fifteen years; an attractive girl, with dark hair, blue eyes, clear complexion and beautiful teeth. Tall, strong and unusually well developed; the first born of seven children. Both parents are extremely nervous; family history is fairly good, except that a paternal uncle died of pulmonary tuberculosis.

Esther is a moral imbecile of middle-grade. She has had the ordinary diseases of childhood. Examined by several well-known neurologists, they report "an irritable spine and many hysterical stigmata."

In her twelfth year, a fall from a second story window caused frequent complaints of pain in the back. Six months later after a fall from a street car, she developed fainting spells of a hysterical nature. With poor memory, and in school no power of concentration, she was far behind others of her age, but could read, write and care for herself in every way. Had once worked as a cash girl in a large department store, where, proving a disturbing element, she was discharged.

Her father described her as "incorrigible, disobedient, untruthful, profane, vulgar, tricky and silly. Would steal at times, run away from home for a whole day, and loiter through stores, pricing what she could not buy." A confirmed malingerer, she would do anything to attract attention; telling the most specious lies, as to abuse, making the most damaging accusations and denials in the same breath. She alarmed the neighborhood by gesticulations at an open window with a large butcher knife, and pretended attempts at suicide. On another occasion she decoyed the family from the house, returned and barricaded the doors, and made the same demonstrations, enjoying the excitement of the crowd, while holding her family at bay and attacking the father upon his forcing an entrance.

She was brought to me by her father. She was apparently modest, with pleasing ingratiating manners, but her true self soon developed. Within three weeks the cottage of girls was astir with her lies and her tale bearing. At night she ran screaming through the dormitories, clapping her hands, spitting in faces, and striking all with whom she came in contact. She was very rough with smaller children, striking without provocation, noisy and uproarious in the dining-room, and would go to any length to attract notice. Extremely indolent, she was tried in various occupations, such as sewing, housework and cooking, with but little result; learning, however, to do fairly good embroidery and quite intricate bead-work.

Her obscene actions and vulgar language, always on the increase, necessitated constant separation from her companions. Finally one night she eloped. Throwing herself from a balcony, and seeking the trolley, with no money, she told the various conductors that she had left her purse. Upon reaching home she notified me by 'phone of her safe arrival and that she would return in a few days.

After a second elopement, she refused to return and her mother, with the aid of a policeman, brought her back.

Having persuaded her father within the year on the promise of good behavior, to remove her permanently, we were, within three months twice urged to re-admit her, but refused.

Then she began to appear in the public eye, and to seek that notoriety which was to her as sweet incense.

Deliberately falling from the step of a trolley car, although absolutely uninjured she instituted suit against the company. Asked for an opinion, I gave it frankly and unhesitatingly, and the case was dropped.

Her next appearance was in the public press, as "the living incarnation of truth and honesty." According to her story, while walking on the street she had picked up a handsome purse, decorated with gold. A few steps farther she met a "lady apparently in distress, handsomely dressed in lavender, with wavy golden hair, her one ungloved hand glittering with diamonds. I suspected right away what the matter was. 'Oh! I have lost my pocket-book with $800,'" she exclaimed; whereupon Esther placed the purse in her hands. The lady rapturously embracing and kissing her, whisked her off in a cab to a fine hotel, to lunch, giving her name and address, telling her she had just arrived from New York to do her shopping in Philadelphia. Esther in return confessed that she had wished to study nursing; that 21 was the required age, and that she had given it on entering the hospital, but her conscience smiting her, as she was only 16, she confessed the truth and was forced to leave. The lady, overcome with gratitude, and pity for her disappointment, first offered her a large sum of money, which she most virtuously refused; then taking her to a large jewelry store, she gave her an opal ring and a locket encrusted with diamonds. Esther did not know the price paid, but "the lady handed the clerk several orange colored bills."

All her friends called to see the jewels and to congratulate the damsel on her good fortune, over which there was great rejoicing. When the mother, with true Hebrew thrift, took the articles to be valued, she found the ring was worth but seventy-five cents and the locket twenty-five cents. The registers of the leading hotels did not confirm the name and address of the lady, as given, and Esther finally acknowledged that the whole story was a fake.

Within a month after this she 'phoned that she was studying nursing at one of the large hospitals, and had found an "idiot child who would be very happy in your ideal, lovely home for poor unfortunates." Refusing to parley with her, she, the next day, came to see me to press the admission of the child.

*For obvious reasons, fictitious names are substituted throughout this paper.

Subsiding for almost a year, she next appeared as a patroness of a Hebrew charity ball, a picture of her in evening dress decorating the front page of a daily paper. Shortly after, she again came to visit me, gorgeous in a brown satin suit and a fashionable hat and feathers. She had gone into philanthropic work and bringing with her the father of a feeble-minded girl, making application for admission, she was rather nervous lest he should learn from me that she herself had once been my patient. Dismissing her, she within a day or two returned, this time costumed in blue satin, and being ordered away, she in two or three days sent another applicant seeking admission for his son, she having told him that she was connected with my Committee on Admission and Discharge. All this time, while she was continually courting publicity through lies, her father was making every effort to return her to the care of the institution.

When next heard from she had established an "ethical class to teach young men and women good morals and society manners," a small fee being charged, which, she claimed, was devoted to charity.

In a few months she reappeared, and as "The Forsaken Bride" once again her portrait decorated the newspapers. Her first statement was that a certain man had married her for money—her dot of $6000—but when he found he could not gain possession of it, he had, within a month, deserted her, eloping with another girl. Another version of her story was that she had married solely and simply to please her parents, and leaving her husband within twelve hours, began immediate proceedings for divorce. She was described as "a beautiful young girl, well known in certain social circles." This sensation had not fully passed before she again appeared, this time in the role of an essayist. Carrying in her hand-bag, a copy of her essay upon Marriage she, on meeting one of my employees in Broad Street Station, insisted upon reading then and there, excerpts from the manuscript, which covered a number of sheets of foolscap. This she later actually succeeded in having printed in a daily paper of wide circulation.

A year ago the press again presented this irrepressible irresponsible, who in æsthetic dress, with flowing hair and eyes raised in "soulful expression" was pictured as "The Bride Expectant." Her romantic and veracious (?) version of the story is that she had knit for a certain, famous impressario, a silk watch fob, and, pleased with the attention, he introduced her to a member of his orchestra, the result being a love affair and a marriage speedily arranged. The groom, a Russian, claimed to be a protege of the Czarina, who, it is said, sent the bride a jewelled watch. A famous violinist was the best man. Immediately after the ceremoney, they set sail for Russia, stopping *en route* to witness the coronation of King George.

To the notice of her wedding were appended some quotations from her Essay on Marriage:

"Marriage is not necessarily a blessing; it may be the bitterest curse. It may sting like a bee and bite like a snake or a dog. Its arbor is as often made of thorns as roses. It blasts as many sunny expectations as it realizes. Every improper marriage is a living misery and undying death. Its bars are grated bars of frozen iron. It is a spirit prison, cold as the dungeon of ruin."

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"The happy union. It is the soul's Eden, the entrance to heaven, the visiting place of angels. It is a charm indescribable of a spirit in captivation with all imaginable beauty and loveliness. Such a union is the highest school of virtue.

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An ill-mated human pair is the most woeful picture of wretchedness that is presented in the book of life and yet there are plenty of such pictures.

"But a proper marriage, a true, interior, soul-linking union is a living picture of blessedness, unrivaled in beauty. It is not given to words to express the refinement of pleasure, the delicacy of joy and the abounding fullness of satisfaction that those feel whom God has joined in a high marriage of spirit."

"Shall marriage be entered blindly, in total ignorance of what it is, what its condition of happiness? Every young man and lady you meet, you will hear them say 'Marriage is a lottery.' And why is it so? Simply because courtship is a grand scheme of deception. Is this not true? Who courts honestly? Some do, but a very few indeed. Let me see, it is conducted something like this:

"A young man and lady meet at a party, ball, wedding, or an evening gathering. The young man sees something in the lady that attracts his attention.

"He seeks an introduction. A little parley of nonsense ensues. Then an appointment for another meeting, and they part, both determined in the utmost desperation to catch the prize if possible. At the next meeting the lovers talk about stars, flowers and poetry, and give hints and signs and tokens, and get mushy, until each understands the other's bewitchery. They become engaged and get married.

"Marriage life now comes and ushers in its morning glory, and they are happy as a happy pair can be for a little while. But life is real and character is real, and when life's reality comes, they find things in each other's character that perfectly startle them. Then comes disappointment and regret.

"Yes, marriage is a lottery. Some may get prizes, and some may not. Nobody knows before he draws, whether he will draw a blank or a prize. Courtship, as it is generally conducted, is a game of blind man's buff. They voluntarily blind themselves and then blind each other."

Thus she passes from our sight, and we wonder where and in what guise she may next appear.

The second case is one of pronounced kleptomania, first brought to my notice by a lady interested in philanthropic work.

Eugenie, aged 20 years, a moral imbecile of the highest grade; a series of contradictions. In appearance unusually attractive; of medium height, slender and well-formed; a blonde, with perfect complexion, golden hair, and blue eyes, that held a pleading, pathetic expression, eyes which she used with marvelous skill.

The family history is very meagre. Her father, who was absolutely unscrupulous, died of cancer of the stomach, her mother of disease unknown, and an older sister of cardiac atrophy. Of her early childhood, partly spent in an orphanage, we have no definite knowledge, until the tenth year when she entered a charitable school for the training of girls. There she was soon at the head of her classes, attaining proficiency in penmanship and mathematics; but pronounced peculiarities, both mental and moral, were soon recognized and she was known as absolutely unreliable, dishonest and untruthful.

Became very much attached to a teacher, whom she yet continued in every possible way to annoy and distress, while lavishing upon her constant and extravagant protestations of affection.

Upon leaving school in her 18th year, and obtaining a position as bookkeeper, she constantly falsified accounts, which, however, she was clever enough for some time to conceal. Finally, in trying to elude detection regarding absence from work, a series of deceptions, exciting suspicion, led to an inspection of the books, resulting in her prompt dismissal. This was followed by several similar experiences. Her mental activities with no guide, owing to the total absence of moral sense, wandered unceasingly in crooked ways, so that loyalty even to those to whom she professed devotion was for her a thing impossible.

For example she managed to secure from an ill sister, within an hour of her death, her signature to a check for a small amount, professedly to pay the week's rent for an aunt but, cashing it without delay she retained one-third of it for her own use.

Wholly indifferent to the opposite sex, she has had no love affairs. She says, however, that while visiting a cousin, and getting a cinder in her eye, over which she made much ado, she had enlisted the sympathies of a strange young man, also a visitor, who removed it. The following morning while lying on the bed in a kimona, he without warning entered her room and, embracing her, persistently kissed both eyes and neck.

She claims she neither encouraged nor resisted, but within two hours she borrowed ten dollars of him, which she never repaid.

Her persistent dishonesty bringing her at last within the grasp of the law, she sought to escape on the plea of irresponsibility, and as a mental defective, voluntarily made application for admission to the institution under my direction.

I found but two of the stigmata of degeneration—a slight facial asymmetry on right side, and a small tubercule of Darwin on the left ear.

She evidently had no inhibitive control of herself and frankly acknowledged that she yielded to every impulse, but did not recognize nor grasp the enormity of her acts. I was impressed with a certain childlike confidence in her manner of expressing herself; especially when, weeping, she pleaded that she might be admitted to what she felt would be a haven where she would be protected from herself.

Her request was complied with and the arrangements completed, when she suddenly withdrew and disappeared, leaving in my hands a copy of the confession to her teacher, above alluded to.

[In the confession the girl, after professing unbounded love for her teacher, tells of stealing money, falsifying the accounts of the firm by which she was employed, and various other offenses. The letter is verbose, goes into minute detail and the expressions contained therein impress the reader as paradoxical in the extreme.—Ed.]

The girl has dropped out of sight.

The third case, Margaret, shows a moral imbecile of high grade, with the sexual impulses exaggerated—a nymphomaniac. She is well born and of good social standing. Mother and maternal grandmother died early of pulmonary tuberculosis. Several members of the father's family were considered "queer." The girl was apparently normal until the age of sixteen, when she suddenly appeared to lose moral sense and ambition. Giving constant trouble to her friends she was continually running off to live with poor families, often without sufficient food. Possessing neither affection nor gratitude; obscene in action, vulgar in language; untruthful, obstinate, passionate, often destroying both furniture and clothing in fits of fury. Retention in the home proving impossible, she at the age of seventeen was brought to my care.

She was a pretty, attractive brunette with olive complexion, dark hair and eyes and a pleasing personality; but wild over sex relations. Wearing often a red carnation she succeeded in attracting the attention she desired, and the boys soon dubbed her "The Red Carnation Girl," a cognomen which pleased her so much that she would sign herself thus, in communicating with them, which she often managed in the most artful ways to accomplish. After six months of "trial," to ourselves as well as to her, on promise of good behaviour, her friends removed her to a boarding school. After a short and stormy sojourn there, she escaped one night down a rope ladder. Hardly was she safe at home when she again ran away, joining a colony of notorious prostitutes. Removed from there, she again continued to elude vigilance and, although all avenues of escape were carefully watched by a corps of detectives, she disappeared from the home city. At the end of five months she wrote from a Southern city, where she was domiciled in a house of prostitution. Here she had contracted both syphilis and gonorrhea, and boasted that she had intercourse nightly with no less than seven different men. When being returned to me, while passing through the train shed in Philadelphia she, within fifteen minutes, managed to attract the attention of no less than nine men, who followed her to the gate.

For two years a disturbing element in the institution, isolated in a custodial building where she was secluded—one would suppose—entirely from men, she yet managed to have two love affairs. Well versed in the "language of the eyes," and meeting during her walks an outside workman every day at the same hour, she soon managed to attract his attention. Then with her attendant walking beside her, she dropped note after note, using a rose bush for a letter-box. This was finally discovered and broken up. She next drew the attention of another employe while sitting on a third-story latticed porch. When locked in her room at night, she would let down a string, kept concealed during the day in her bosom. To this, he would attach his key and unlocking the door, she would then descend and spend an hour or two with him. First, however, she would make up a figure of her clothing, and spreading a handkerchief over the head, would place it in her bed, to avert the suspicion of the night nurse, who visited her at regular intervals.

This liaison discovered, she twice managed to escape, and on being brought back, constantly threatened to repeat the attempt. Extra precautions were taken to prevent this. On one occasion in Philadelphia, her attendant having been knocked down and injured, she had every opportunity to elope, and she would not do it, but accompanying her to the hospital, requested the resident physician to 'phone to me to send an attendant, to accompany her home. She managed to secure an invitation to supper with the medical staff, which she greatly enjoyed. After two years of struggle, her friends yielded to her solicitations and removed her. On the very day of her departure, she spent four hundred dollars on silk dresses, a diamond ring, and the theatre.

Within six weeks she was married, and since then we have lost sight of her.

Alas, poor girls all!—not immoral, but ammoral—types of a race that must ever swell the recruits of the half-world.

The Pathogenesis of Arteriosclerosis.

Arteriosclerosis has been experimentally produced by the injection of adrenalin, or at any rate the main lesions of the disease are apparently reproduced. Cannon, Aub and Binger have found that nicotine in small doses causes an augmentation of adrenal secretion, which throws light on the reason why excessive smoking causes arteriosclerosis. Heavy work stimulates the functions of the adrenals, one of which is to destroy the waste products of muscular activity. Hence the relation of heavy work to arteriosclerosis. Again, febrile infections bear a decided relation to arteriosclerosis because they produce an excess of adrenal secretion.

Thus we have in the adrenal secretion an agent capable of producing, through its selective action on the arterioles, a phenomenon which has become classic, viz., the participation of the vasa vasorum in the morbid process. In the circumscribed or nodular variety of arteriosclerosis the vasal changes are sometimes the only visible lesions, "the primary alteration consisting in a degeneration or a local infiltration about the vasa vasorum." If we recall that the arterioles, whose calibre is reduced or perhaps obliterated by an excess of adrenal secretion, are the terminal arteries from which the vasa vasorum receive their blood to nourish the coats of the larger arteries, the cause of the local degeneration and sclerosis becomes plain, the arterial coats are deprived of sufficient arterial blood to sustain life, and local tissue necrosis occurs.—(*New York Medical Journal*, June 1, 1912.)

With a moderate degree of effusion beneath a thin abdominal wall, the ripple-like fluctuation is easily detectable if the hand is not placed too near the spine, but the thicker the abdominal wall, whether from fat, muscle or edema, the more difficult does it become to determine the presence of fluid.

In some patients suffering from albuminuria or heart disease, albumin may be found, but in practically all forms of bronchitis and in emphysema, the sputum is free from albumin.

TOXAEMIA FOLLOWING PREGNANCY.*

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Literature is full of reports of cases of toxæmias occurring during pregnancy and due to some unrecognized cause, but there are but few known cases where the toxæmia became manifest after the termination of pregnancy. I therefore desire to report such a case, as the clinical picture was interesting.

On January 25, 1912, I was called to attend in labor Mrs. G., aged 31, a well nourished, healthy multipara, whom I had attended in two previous normal labors. Her personal history was negative; mother had died five years previously of tuberculosis. Labor was absolutely normal and convalescence was normal until February 3rd, or nine days after confinement, when she was seized with a very severe diarrhœa, the stools occurring every hour or so and within twenty-four hours they were as frequent as every twenty minutes and consisted for the most part of mucus and bright red blood; rectal tenesmus was marked and patient complained of pain in the left iliac region. Physical examination was negative; no enlargement of the liver or spleen; no sensitive areas; no jaundice. The blood count showed no changes from the normal; no evidences of a primary anæmia. The urine at this time was negative; the uterus was in the usual condition; the temperature had not risen above 99° and pulse and respiration were normal. There was a slight murmur present, which seemed to be of the hæmic type. During the next three days, the symptoms became much more marked and, as was to be expected with such a condition, the emaciation and weakness became extreme. An examination of the stools was made bacteriologically and the colon bacillus was found present in pure culture. The tenesmus and diarrhœa could be well controlled by the free use of opiates and in the next few days, there was considerable improvement, the stools becoming semi-solid. This improvement was only temporary, however, and by the 17th, she was passing bright red blood per rectum every hour; patient now complained of pain in both iliac regions and over the whole abdomen, and nausea and vomiting became marked and persistent. Up to this time the urine had been examined repeatedly but had always been negative; now, however, albumen, casts and red blood cells were present in great abundance, the evidence of some strongly toxic substance acting on the kidneys. The cardiac murmur could be heard at every valve and there was some slight œdema of the ankles. From this time on, she grew rapidly worse, the nausea, vomiting, œdema and loss of blood continued and on March 22nd, the illness terminated fatally.

The striking points in regard to this case were: the temperature at no time rose above 99°; there was no jaundice; no petechial hemorrhages; no chills nor any evidence of puerperal infection, either subjectively or objectively. The blood culture was negative, the leucocyte and differential count did not vary from the normal limits and no pathological cells were present. From the course of the case, I concluded that this was a case of toxic albumenuric action, and that during the involution of the uterus the hypertrophied elements of the uterus were absorbed as usual, but that, for some reason unknown, these albumenous elements acted as toxic bodies on the healthy cells, leading to their destruction. This is a well recognized cause of other conditions and has been proved experimentally. Authorities are recognizing this more and more and are trying to find the cause or causes of such action. Such an explanation is logical, when we remember the wonderful work that has been done experimentally along these lines in recent years in the production of specific anti-bodies for foreign albumen, and if in the case now reported we consider the albumen absorbed from the uterus as foreign albumen, which in a sense it is, our explanation is quite logical.

*Read before the 15th annual convention of the Am. Medico-Pharmaceutical League, May 27, 1912.

Surgery

ANAL FISSURE.

T. Chittenden Hill, of Boston, presents a thorough study of the palliative and operative treatment of anal fissure, a lesion which by reason of the suffering it occasions calls for our best thought and skill. Pain at the time of defecation cannot be relied upon for diagnosis, since abscess, thrombotic hemorrhoid, foreign body, stricture, syphilitic or gonorrheal ulceration and malignant disease give rise to this symptom as well. Speculæ should rarely if ever be used in making the diagnosis; inspection and digital exploration should suffice.

The patient should be placed in the semi-prone position with the thighs moderately flexed upon the abdomen, the patient pulling upward upon one buttock. A pledget of cotton saturated with a 20 per cent. cocain solution should be laid in the fissure, gently pressed well up into the anal canal and allowed to remain there for five minutes. Then if the patient strains and the surgeon everts the radial folds at the anal orifice, the fissure should come into view. The lower inch of the bowel should be explored for internal hemorrhoids, submucous fistulæ and polypoid growths. These must be dealt with if present.

Perhaps the most important factor in determining the method of treatment to be pursued in a given case is the amount of spasm and hypertrophy of the external sphincter muscle. In recent cases these will not be so marked as in the chronic cases. There are all degrees of spasm and hypertrophy and experience is necessary in determining the best method for each case. In the simple cases palliative treatment is usually successful. If there is only a slight degree of hypertrophy, excision will generally suffice. If the hypertrophy is moderate, dilatation under general anesthesia is indicated. If there is great spasm and much hypertrophy, incision is the only operation that can be safely relied upon to give permanent relief.

As to palliative treatment of simple cases. Correct dietary errors so as to regulate the bowels, this to be aided by nightly injections of olive oil. Cascara and compound licorice powder may have to be used. Avoid the setting up of liquid stools, which are very irritating to fissures. Local cleanliness is imperative. The patient should be seen every four or five days and the sphincters moderately stretched under cocain, after which an application is made of ichthyol and glycerin (15%), or balsam of Peru (20%) in castor oil. Use these on small pledgets of cotton, allowed to remain for several hours. Pure ichthyol sometimes works well, though the milder preparations mentioned will generally give more satisfaction. Nitrate of silver, while very popular, often disappoints.

If excision be elected infiltrate under and around the fissure with 1-10 of 1% cocain. A small fold of skin at the lower angle of the fissure, or the sentinel pile, if one be present, is seized with tissue forceps and the ulcer excised well up into the anal canal.

Lynch condemns divulsion, on the ground that it requires an anesthetic, increases the traumatism, causes extravasation, seldom gives permanent relief, and should have no place in the treatment. But Hill does not agree with Lynch and thinks that dilatation has a useful field. If the cases are carefully selected the operation will prove satisfactory and the cure will be permanent. The advantages are simplicity, no cutting and little after-treatment. It is the method of choice, Hill thinks, where there is only a moderate degree of hypertrophy of the external sphincter, especially in children and elderly subjects.

Incision is almost universally favored and in some hospitals is practised exclusively. Formerly the fibres of the muscle were divided through the base of the fissure, but now it is considered better practice to divide the muscle just to the right or left of the posterior median line, without regard to the location of the ulcer. It eliminates the spasmodic action of the sphincters and gives the fissure a chance to heal. The

division is made at right angles to the muscle fibres and carried outward for at least an inch to secure good drainage. The internal sphincter must not be injured, else incontinence of some degree will result. Local anesthesia is generally employed. With a long, fine-pointed needle begin the infiltration in the epidermis about 1½ inches from the anus. Slowly infiltrate about the fissure and sentinel pile, if one be present. Then insert the finger in the anal orifice and feel the interval between the external and internal sphincter and press outward. This renders the external sphincter prominent, so that it can be divided with a scalpel as an assistant sponges the line of incision, so that one is aware when the deepest fibres are severed. Any exuberant granulations or undermined mucous membrane adjacent to the fissure should now be removed. If any polypoid growths are felt they should be snipped off and the line of incision packed as is customarily done after fistulæ operations.

The results following this operation are always excellent, and any case of fissure, whether single or multiple, or whatever its location, can be cured and the cure will be permanent.—(*Boston Med. and Surg. Jour.*, April 11, 1912.)

ACUTE MASTOIDITIS.

Lefferts A. McClelland, of Brooklyn, New York, in a brief paper forcefully outlines the indications for early operation in acute mastoiditis. He thinks there is much pernicious frittering away of opportunity for doing good, life-saving and organ-conserving work. After the incision by way of the membrana tympani, cases are too frequently subjected to inefficient palliative treatment, medicinal, topical and surgical, when it is better promptly to invade the antrum. Could these cases be more frequently handled by the direct method it would be a rare occurrence to find that extension of the suppurative process had occurred beyond the antrum or its contiguous cells.

As a rule such direct method would be conservative in the best meaning of the word. This plan of treatment would limit the amount of pain which a patient usually suffers and diminish fever, and maceration within the tympanum would be modified or prevented, which latter is so detrimental to the integrity of the mucosa. And there would be less liability of deep necrotic changes occurring to the bony walls of the cavity involved, while the orifice of the Eustachian tube would naturally be more competent to aid the process of drainage, one of its chief functions, since the mucosa being less swollen at its mouth would the better fit it for receiving the outflow in the drainage process.

The relief of pressure due to a drum full of pus serves to prevent the pus from pushing its way through the aditus to the antrum, and thence by a mining process through the roof of the antrum into the floor of the middle fossa of the skull, and also tends to avert encroachment upon the great channel which conveys the venous blood from the brain to the jugular. Early intervention will usually mean a less extensive operation.

If a case of otitis media acuta suppurativa which in spite of active and proper treatment (prompt and free incision of the membrana tympani, irrigation with warm antiseptic solution through the Fowler irrigator, suction by Siegel's otoscope, rest in bed, leeches, ice to the mastoid if tender, free catharsis, and such attention to the nose and epipharynx as is necessary) remains unrelieved after forty-eight hours of such trial, as shown by tenderness over the antrum, elicited by deep, firm pressure, and especially if the patient still suffers pain in the ear, it seems wise to consider the question of doing a simple mastoid operation to cure the condition before serious damage may be done. If, however, the discharge is gradually diminishing, pain subsiding, mastoid tenderness going or gone, and the temperature shows no suspicious turn, it may safely be considered wise to continue the simpler plan of treatment.

But in influenzal infections and in such diseases as typhoid fever, scarlatina, measles and diphtheria the promptest intervention is demanded. These cases should be operated upon forthwith, for these are fulminating cases and the extent and character of the bony destruction are marvelous to contemplate. And here not so much dependence is to be placed upon the degree of fever and other clinical criteria.—(*N. Y. State Jour. Med.*, Feb., 1912.)

Hepatic Cirrhosis and Ascites.

Edmund A. Babler, of St. Louis, discusses the surgical treatment of ascites secondary to vascular cirrhosis of the liver. Organic disease of the heart or lungs contra-indicates operation. So also does Bright's disease. Fifty-five or sixty is the age limit. When marked jaundice, emaciation and hebetude appear, practically all surgeons agree that operation is contra-indicated.

Babler administers morphin and atropin half an hour before operation. The peritoneum is exposed through a 4- or 5-inch median incision after the integument has been injected with a 0.1 per cent. solution of cocain or novocain. The posterior sheath of the right rectus is incised longitudinally near the inner border of the muscle and the latter separated gently from the posterior sheath. The procedure is repeated on the left side, after which the muscles are retracted and a transverse incision made through the peritoneum, care being taken not to cut the vessels in the round ligament. After having determined the condition of the viscera, the omentum is drawn through the incision and held upward by an assistant while the lower lip of the incision is sutured to the posterior surface of the omentum, care being taken to prevent wounding or including large vessels. The omentum is then drawn downward and tucked behind the recti muscles and round ligament. Several catgut ligatures are necessary to retain the omentum in its new location. The upper lip of the incision is sutured to the omentum and the abdomen is closed in the usual manner. In debilitated patients the linea alba should be overlapped.

The most important advantages are as follows:

1. Possibility of thorough inspection of the abdominal viscera.
2. Utilization of practically the entire surface of the omentum without disturbing the normal relation of the stomach and transverse colon.
3. Prevention of compression of the omentum between the muscle and its sheath.
4. Practical elimination of danger of postoperative hernia and intestinal obstruction.
5. Avoidance of injury to blood- and nerve-supply of the recti muscles.—(*J. A. M. A.*, April 13, 1912.)

Enucleation of Tonsils.

Harold A. Foster, of New York, advocates finger enucleation of the tonsils when diseased. Incomplete surgical procedures leave the base of diseased tonsilar tissue in the throat, with resulting grievances to both patient and operator. They should be removed in persistent inflammatory conditions, either recurrent attacks of acute tonsilitis, chronic inflammation or tendency to peri-tonsilar abscess; also in cases where there are resulting auditory symptoms arising from pressure or in hypertrophy causing mouth breathing. General ether anesthesia and one administration are employed; abolish the reflexes; second administration not called for. Patient in dorsal position, head supported by assistant, mouth gag in position. First and most important step to insure proper enucleation is to gain admittance to the capsule through the mucous membrane band, which is the continuance of the anterior pillar. This is done by placing the tip of the right index finger on the above-named mucous membrane fold of the right tonsil at its equator and sweeping it outward and forward, separating the anterior pillar from the capsule. As a rule only slight force is required. Having reached the capsule the distal phalanx is swept upward, outward and then backward around the

capsule as far as the posterior pillar. The globe is drawn forward to avoid tearing the posterior pillar and the finger is swept around the base. The tonsil is retained in the throat only by its small pedicle. If not too fibrous this is freed by the index finger or by it with the assistance of the thumb. In very fibrous tonsils the volsellum is used to draw the tonsil through a small snare, and the pedicle is freed close to the wall of the throat. The patient is quickly turned face downward to allow blood to escape. The left tonsil is now freed by the left index finger. The operation takes about two minutes. —(*Am. Jour. Surg.*, April, 1912.)

Genito-Urinary Therapeutics

GONORRHEAL ARTHRITIS.

James Warren Sever, of Boston (*Boston Med. and Surg. Jour.*, May 16, 1912), gives a résumé of the recent literature of gonorrheal joint treatment, with especial reference to the vaccines, serums and toxins. Bacterins stimulate the patient to supply his own antibodies. In the use of serums the patient is supplied by antibodies present in the serum, on account of his own inability to produce them. The first confers active immunity, the second passive. When the affection is acute and localized the vaccines are indicated (bacterins); when it is general the serums must be supplied. The mixed vaccines are generally used, containing not only gonococci but also strains of staphylococcus aureus, albus and citreus. By their use pus infections of the prostate, vesicles and epididymis are best attacked. Rectal massage of these organs is to be carried out and Fuller has achieved remarkable results in certain cases of infected joints by excising the vesicles. Prostatic abscesses are to be opened and drained.

Rogers and Torry believe that antigonococcic serum affects pain and inflammation favorably in the chronic cases, given twice a week for the first month.

Jack uses autogenous vaccines. He believes that this type of vaccine acts more quickly in bringing about disappearance of pain, fever, swelling, and also that fewer injections are necessary.

L. E. Schmidt states that vaccines and sera probably do not confer immunity. Satisfactory results followed the use of both types in certain cases. The site of injection is of little importance. Strict asepsis is of course necessary.

Uhle and MacKinney have used antigonococcic serum prepared from sheep, in 2 c.c. doses. They treated 23 cases and in all evidences of local joint inflammation disappeared in less than two weeks. There was no curative effect upon the urethral infection nor upon prostatitis. Out of 7 cases of epididymitis 3 were improved, 4 unimproved.

C. Jarvis finds that stock vaccines give apparently as good results as autogenous ones. Small doses, 1 to 10 million, repeated at intervals of five to seven days, are more reliable than larger ones, such as 50 to 100 millions given at longer intervals.

Swinburne reports remarkable results from bacterins in acute cases. Certain cases cleared up completely after one or two injections of the mixed bacterins in a few days. In chronic cases he advocates active urethral, prostatic and vesicular treatment.

Orville Horwitz, who has had a large experience, concludes that the vaccines occasionally relieve acute pain but are otherwise useless, that serum is of occasional service in severe case of epididymo-orchitis and myocarditis, and that in acute and sub-acute arthritis it should be used as a routine treatment.

Robert H. Green finds that the vaccines benefit some cases and are ineffective in others, and serum in certain cases has a marked value in relieving pain.

Zieler believes that a general gonococcic infection is best met by the administration of vaccines.

Regarding other measures, Preiser thinks that the Bier method is without success, while Zieler believes in it. In the old chronic cases orthopedic measures are indicated, such as opening the joints and inserting muscle strips after the fashion of Murphy, or fascia, or distension of the joint by oil and iodoform as advocated by Brackett. Stiff and tender spines are to be protected by plaster jackets until the acute irritation has subsided. Preiser believes that early passive motions prevent adhesions. Titus treats the prostate and vesicles with the vacuum electrode and states that the actinic action of the high-frequency rays destroys bacteria by direct effect. Dilating the urethra by means of a sound, and washing it out with medicated solutions, is often of great importance, for often old foci are concealed behind urethral folds or deep strictures. The treatment of the joints locally is best carried out by rest—either by splinting in a cast or by bed treatment. Later massage and easy motions are indicated. Deep slashing about a very painful joint may give relief. The general condition must be built up.

Treatment of Gonorrhea in Girls.

Louise Morrow and Olga Bridgman, of Geneva, Ill., (*Jour. A. M. A.*, May 25, 1912), describe their methods of treatment as carried out at the State Training School for Girls in Geneva. There are about 200 girls committed annually to this institution, of whom 55 per cent. are infected. The majority of the cases are subacute or chronic and the infection is most frequently a cervicitis. In those who have borne children the infection is a little more obstinate and has a much more marked tendency to extend into the tubes. In treatment the speculum is used whenever possible. Douches have been found to be quite useless, or worse than useless. Moreover, they effectually prevent the action of other medication. Along with douches, instillations of argyrol and nitrate of silver have been givn up, and little girls and those with innocent infections are treated with vaccines. The instillations were found to be not much better than the douches. In the cases where the speculum can be used, 25 per cent. silver nitrate to the cervix and 10 per cent. to the vagina is applied once a week, followed immediately by an application of petrolatum. A paste of iodoform in glycerin, 25 per cent., is also used once a week. Weaker solutions of silver do not appear to be very efficacious. Gonococcus vaccine when used alone is not entirely satisfactory. In the cases presenting joint involvement the vaccine acts excellently. In those cases of gonorrhea in which a vigorous local treatment alone has been used, the results have been exactly as satisfactory as when this treatment has been combined with the vaccine.

CONCLUSIONS.

1. For cases in which the speculum can be used, semiweekly treatments, once with 25 per cent. silver nitrate to the cervix and 10 per cent. to the vagina followed by an application of petrolatum, and once by a 25 per cent. paste of iodoform in glycerin have given the best results. This treatment is not improved by the use of gonococcus vaccine.

2. For little girls and in virgins with an innocent infection, local cleanliness and the use of gonococcus vaccine give the best results. Because of the tendency to recurrence of the infection, however, this is not entirely satisfactory.

3. Vaccine is of the greatest use in cases with joint complications. Here it is almost invaluable.

The results in the treatment of acne vulgaris with autogenous vaccines are uniformly good when one can be certain the patient will follow directions, and recovery can be almost assured.

Practice of Medicine

PULMONARY PHYSICAL SIGNS.

Hobart A. Hare warns us against the assumption that all pulmonary physical signs are those of tuberculosis. The fact that physical signs are present in the lungs is commonly considered fair evidence that tuberculosis is the cause, and so individuals are classed as tuberculous who are not so diseased. This is not to make light of the importance of recognizing that the early diagnosis of tuberculosis is essential. The truth is that there are no physical signs in the chest which cannot be produced by lesions which are not tuberculous in origin. The recognition of the fact that pulmonary tuberculosis is curable in the great majority of cases, if its presence is determined early in the malady, has been impressed so strongly upon the minds of medical men, and the disastrous results of oversight are so often met with, that there is a tendency to regard all abnormal physical signs in the lungs as indicative of tuberculosis unless the symptoms point so plainly to other affections that tuberculosis is manifestly ruled out.

Dullness and the absence of vesicular breathing at the base of the lungs nearly always result in the diagnosis of "consolidation" or "pneumonia." In severe bronchitis, in whooping-cough, and after operations in the upper abdominal segment the real state is often atelectasis.

The practitioner almost never regards the bronchial lymph nodes as important facts in diagnosis, yet these are often the cause of marked physical signs. While they are often tuberculous yet they may be infected by other organisms than the tubercle bacillus, and many physical signs thought to have their origin in the lung tissues are due to partial bronchial occlusion by pressure. Blowing breathing and cough may result therefrom. French has recently pointed out that the lymph nodes immediately below the right bronchus are often infected, and Siennikow has shown that these right lobes are apt to become very large when infected.

Every subacute or chronic pulmonary lesion presenting impaired resonance, prolonged expiration and, for a short time, febrile movement, is not tuberculosis. A mistaken diagnosis may prove a great calamity. We must be careful that the predominance of tuberculosis does not cause us to commit the patient to the constant woe of worry and alarm, until we have excluded the conditions which produce physical signs in the chest similar to those of tuberculosis. In many instances untold mental misery for the patient and his family is engendered by the sentence of tuberculosis infection, and his whole manner and course of living are altered. His career is not only changed in its course but probably narrowed or arrested. He is afraid to plunge into the struggle for success because he is in dread of a relapse or return of his "old trouble." His seniors are afraid to put him in line for advancement lest their act prove a mistaken kindness and cause his breakdown, his chance of getting life insurance is stopped, and even his marriage may be prevented by the blot on the history of his lungs. —(*Medical Record*, April 27, 1912.)

Pseudomalarial Types of Pyelitis.

Douglas Vanderhoof, of Richmond, Va., calls attention to the pseudo-malarial types of pyelitis. Of forty-seven cases treated by him, twenty-one had been diagnosed as malaria. The constitutional symptoms may closely simulate malarial fever, for in fifty per cent. of the cases neither the history of the illness nor thorough physical examination will reveal any clues suggestive of an infection of the genito-urinary tract. When the onset is insidious, without pain or local symptoms, and there are intermittent or remittent fever and chills occurring with peculiar regularity, malaria is strongly suggested. Pyelitis in early childhood is much more common than is usually supposed and is the cause of many unexplained fevers.

These cases may be roughly divided into two groups, acute and chronic. The acute cases may terminate very suddenly or last for weeks. The chronic are not so severe, and are apt to be marked by periodic aching in the extremities, chilly feelings and night sweats. Tuberculosis is sometimes suggested. In acute pyelitis the paroxysms may be identical with those of malaria, presenting hot, cold and sweating stages, with fever-free intervals.

Quinin being a specific in malaria it is useless to continue this remedy if the febrile disturbance persists, and even in moderate doses it will be found to be very irritating to the kidney in these cases. On gross inspection the urine may appear clear, but pus-cells will be found, often accompanied by an occasional red blood-cell. Urethritis and cystitis must be excluded by endoscopic or cystoscopic examination. In chronic cases in women it is absolutely necessary to secure a catheterized specimen for microscopic examination, in order to exclude contaminating cellular elements.—(*J. A. M. A.*, April 20, 1912.)

Obstetrics and Gynecology

Pelvic Floor Lacerations.

J. Clifton Edgar classes the factors which bear directly and indirectly upon the causation of pelvic floor lacerations as follows (*N. Y. Med. Jour.*, April 20, 1912): 1. Anomalies of the expulsive forces. 2. Anomalies of the soft parts—vagina and pelvic floor. 3. Faulty presentations and positions of the fetus. 4. Faulty posture of the mother. Faulty position of the mother is an important factor not so often considered as the other factors. The exaggerated lithotomy position at the edge of the table is open to objection when the head is at the outlet. It conduces to unnecessary injury to the pelvic floor. At the moment of extraction or expulsion of the head the patient's thighs should be brought down into the ordinary dorsal or "cross bed posture." The delivery of the head through the pelvic outlet with the forceps still applied is usually unnecessary and favors laceration.

The mechanism of pelvic floor lacerations Edgar believes to be as follows: 1. When the remains of the hymen give way to the presenting part, the laceration may extend to the fourchette, or in multiparæ may begin in the latter. The injury may stop at the fourchette or extend to a variable degree into the pelvic floor. 2. The rupture of the pelvic floor is simply a continuation of the vaginal laceration. The mucous membrane is the first to yield, the tear extending into the subjacent tissue. In fact we sometimes see a submucous and muscular rupture of the pelvic floor of such a degree as to involve all the tissues down to the rectal wall, and including the latter, and still the *integument* over the perineum remain intact and present no external evidences of rupture.

More attention should be given to the causes and prevention of perineal lacerations, including posture of the patient.

Version in Transverse Presentations Resulting from Thigh Pressure Produced by Posture.

A. F. A. King, of Washington, D. C. (*Interstate Med. Jour.*, May, 1912), describes his method for accomplishing turning which obviates the dangers of internal podalic version in transverse presentations, especially the liability to uterine rupture and septic infection, particularly in unfavorable and neglected cases.

In transverse cases where the head rests on the right iliac fossa, let the woman place her left foot flat upon the ground and forward, *i. e.*, in advance of the body, and then assume the squatting attitude by placing the right foot much farther in the rear of the body, and resting only on its toes. In cases where the head rests on the left iliac fossa, the right foot must be planted flat and forward, while the left foot rests

behind and on its toes. These are natural squatting postures. To squat symmetrically, with both feet in line and flat upon the ground, is much more difficult.

King noticed, many times, when preparing to perform internal version, that the presentation would correct itself after the patients had squatted over low chamber-vessels to urinate. This rectification of transverse cases by posture he calls "Nature's Method." Among many primitive peoples the common posture for parturition is the same as for defecation, which probably accounts for the infrequency among them of transverse presentation.

Textbooks ascribe "spontaneous version" or "spontaneous rectification" to unilateral and unsymmetrical contractions of the uterus, and other hypotheses. King's facts are more convincing.

The horizontal thigh of the posterior-placed foot will press the child's head from the iliac fossa into the pelvic entrance; while the other (vertical thigh of the forward foot) will lift the back and breech of the child upward and inward toward the ensiform cartilage. Thus the thighs, one on each side, act on the two poles of the fetal ovoid in such a manner as to make it glide round from a transverse (or oblique) position into a vertical one, and the cross-presentation is corrected without the infecting fingers of the obstetrician having even touched the woman. A high degree of force is brought into play by this postural method.

Vaccine Therapy

A BRIEF SURVEY.

T. Wood Clarke, of Utica, New York, gives a survey (*New York State Jour. of Med.*, May, 1912) of vaccine therapy in medicine. Aside from its value in the treatment of typhoid fever the typhoid vaccine has been used to advantage in the prevention of relapse, in combating local infections, as bone abscess and cholecystitis, and in dealing with healthy carriers of the typhoid bacillus. As to its prophylactic properties, there is now abundance of proof. In colon bacillus pyelitis, cystitis and simple bacilluria, and in genito-urinary tuberculosis with secondary colon bacillus infection, autogenous vaccines give very good results. The initial dose is 200,000,000 increasing to 1,000,000,000. In the treatment of furuncles and carbuncles, the bacterins, of course, give great satisfaction. Gilchrist claims that the autogenous vaccines are not required in these conditions, stock vaccines serving practically as well.

Clarke injects at seven-day intervals, commencing with an initial dose of from fifty to two hundred millions. Many men prefer a shorter interval, but Clarke thinks his method more in accordance with Wright's theory and more successful. In acne vulgaris equal success is reported from the use of a combined vaccine containing the staphylococcus and the *Bacillus acnes* of Gilchrist, on the theory that the original nodule is due to the bacillus and that the pustule is a secondary infection with the staphylococcus. A good initial dose is fifty million staphylococci and five to ten million of the bacilli. The lesions are aggravated at first, but there is quick subsidence and the disease as a rule disappears after from three to ten injections at ten-day intervals. In eczema, especially eczema seborrhœicum, astonishing cures have been obtained by Gilchrist. The staphylococcus albus vaccine is here used.

Good results are also reported in erythema multiforma, sycosis non parasitica, dermatitis herpetiformis, acne rosacea, and pityriasis rosea. In erysipelas, septicæmia and scarlet fever the reports of streptococcus vaccine are not especially convincing. This is probably due to the very acute rapid nature of the diseases caused by the streptococcus. The dose of this bacterin is smaller than that of the other pyogenic cocci; from ten to twenty-five million. In gonorrheal vulvovaginitis the gonococcus vaccine has given very favorable results at the Vanderbilt Clinic in New York. The dose varies from fifty to two hundred million. Locally, only ordinary cleanliness is required. As to gonorrheal arthritis, reports differ greatly. Actinomycosis and glanders have improved under autogenous vaccine treatment. In pyorrhea alveolaris the results of vaccine treatment have been most encouraging. Autogenous vaccines are used in this disease, prepared from the streptococcus, staphylococcus and pneumococcus isolated from pus pockets at the roots of the teeth. When one fails another is used.

In tuberculosis the results of tuberculin therapy are encouraging. It is an aid in combating the disease. It is agreed that the treatment should be confined to latent and subacute non-febrile cases and that it should, if possible, be carried out in connection with the usual fresh air treatment. We have learned to use small doses, beginning with about one-hundred-thousandth of a milligram of the bouillon filtrate, and increasing progressively by doubling the dose until from 0.1 to 1.0 gram is administered at a dose, the intervals varying from five to ten days according to the reaction. The ideal procedure is to keep the dose as large as possible below that at which a reaction is produced. The total course of treatment should consume about two years. If a reaction appears after a dose, the treatment should be discontinued until the fever has subsided, and the next dose should be reduced to one-half the strength of the offending one. The question of the relative value of tuberculin prepared from the organisms of the human and bovine type is still unsettled. In the treatment of tuberculosis of the genito-urinary system, tuberculin should not be used to the exclusion of the knife if only one kidney or testis is diseased and surgical interference offers a hope of eradicating the disease. In inoperable bladder cases or when both kidneys are diseased, or as an adjunct to surgical procedures, tuberculin may be used to advantage. The injections are contraindicated when the patient is febrile, only latent and quiescent cases being amenable to treatment, as in pulmonary disease.

The Present Status of Vaccine Therapeutics in Purulent Diseases of the Ear.

René H. Huvelle, of New York (*New York State Jour. of Med.*, May, 1912), thinks that in the use of bacterial vaccines we have a valuable aid in the treatment of purulent diseases of the ear—it is not to be considered as an absolute specific. The usual regular treatment must be given. A mistake is made in the endeavor to obtain rapid cure when too large doses are given at the beginning. When the vaccine is standardized to 500 millions bacteria to the c.c. in staphylococcus infection, once should begin with ¼ c.c. as the initial dose. This is increased ⅛ c.c. every other day, until 1 c.c. is reached, which latter dose is given about five times every other day. In streptococcus infection it is better to begin with 25 millions bacteria as the initial dose and increase 10 millions. As a rule, three or four injections are all that is necessary. The injections are made in either arm, under aseptic precautions. Contraindications are acute constitutional diseases, as septicæmia, pyemia and sapremia, continued high fever, and nephritis. In staphylococcus infections vaccines give the best results. In streptococcus infections the results have been far less brilliant, but nevertheless encouraging. In discharging ears due to the tubercle bacillus, pseudodiphtheria and pneumococcus the results have not been very satisfactory. Vaccines made from the bacillus Xerosis, when present, are often beneficial as an aid to other treatment. This bacillus is very commonly found in chronic purulent otitis media. In the case of the bacillus pyocyaneus, the results are usually negative. In a general way the vaccine treatment of chronic and subacute purulent otitis media, post-operative mastoiditis, furunculosis and perichondritis of the auricle has been well justified by the results.

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QUESTIONABLE MORAL STANDARDS AND DIVORCE.

We are but slaves, close fettered by convention;
To code and calendar we bow the knee,
Oft we proclaim our firm and fixed intention
To rise in wrath, to conquer and be free.
But when the hour arrives
We cast away our arms and scuttle for our lives!

The subject of divorce is of more interest to medical men than to any other class, unless it be the clergy, lawyers and interested litigants. The known bearing of sexual incompatibility is the reason. The statutory cause cannot be estimated as the chief index of incompatibility, for it ranks third in the list of causative actions and is not increasing proportionately with other causes, such as cruelty and neglect to provide, which are increasing rapidly.

Every twelfth marriage ends in separation and economic conditions enter largely into the subject. Contrary to popular opinion, divorces granted to women exceed but little the number given men.

Statistics reveal very little, after all, as they only recite ostensible causes. Adultery itself is not of necessity an evidence of incompatibility, as many men with wives sexually competent are easily fascinated by other competent women. These men are polygamous by nature, just as other men may be "essentially monogamous" or essentially celibate. In this connection it must be remarked we are considering these matters in the physiological and psychological rather than the "moral" or legal sense. We may class Beethoven as a celibate, since he was never legally married. Psychologically considered he was a polygamist, in the sense that he was never done with love affairs. The psychological classification is the proper one, not the "moral" or legal in his case.

Our marriage system takes no account of numerous exceptions to the common run of men who are able psychologically, physiologically and legally, perhaps, "morally," to conform to the requirements of the Philistines who constitute our social mentors—the numerous exceptions who belong in the polygamist class. We are in the habit of thinking, and even insisting, that those who regard the marriage bond lightly are persons of artistic temperament who are eccentric and exceptional. There is no greater fallacy. Among all ranks and kinds of men are the polygamists. They are obliged to conform to the laws of the Philistines. Even the celibates are regarded by their monogamous fellows askance. It is almost as difficult to be a celibate, outside of the church, and almost as damaging to personal repute, as to be a polygamist. We suppose that an enlightened and truly moral society would accept polygamy, so long as those who practiced it were economically situated to undertake it, and would not quarrel with the celibates. In our system everything is curiously mixed. We bring social pressure to bear on our celibates, to compel them to marry, then divorce them on some pretext or other, after which, no matter what stigma may attach to them as divorced persons, they cease to be classed as celibate. We make the way people conform, or fail to conform, to our artificial requirements, the criterion of morality. Reason does not enter into the matter at all. Arbitrary standards are set up—and enforced.

It may be said that it is all a matter of expediency—greatest good of the greatest number, and all that sort of thing. But is it working out so as to bring the greatest good to the greatest number? Not in itself, but in so far as it is rather rapidly bringing us to a contemplation of a new order of things. Freedom to divorce for good cause is a salutary thing. It is the evil conditions and maladjustments that give occasion for divorce that are perilous; and chief among them is sexual incompatibility, growing out of fundamental tendencies such as we have indicated. No solution of the so-called divorce problem is feasible that does not take into consideration these tendencies and differences. We should reorganize the marriage system upon a sound physiological and psychological basis. This would be both scientific and moral and would abate divorce and its alleged perils.

Consider the error into which we have fallen in the belief that only eccentric geniuses manifest departures from the Philistine attitude. This mistake has grown out of the fact that certain polygamists have happened to be persons of conspicuous and distinguished careers, as Caesar, Charlemagne, Napoleon, Nelson, Mahomet and many others. Their sexual peculiarities seem to the Philistine as unique as their intellects and actions. In this day some third rate novelists within our immediate ken, with a genius for newspaper notoriety, attract special attention through the sexual readjustments they effect for themselves, all of which leads thoughtless people to form the silly conclusion that the third rate novelist is quite unique in his sexual characteristics. Ultimate solutions, however, are not arrived at by the unthinking.

These statements apply to women as well. Many intelligent women are not so opposed to polygamy as conceited males suppose. As George Bernard Shaw remarks, many women would prefer to have a tenth share in a first-rate man than a whole share in a tenth-rate man. He believes it is the tenth-rate man, who would be left mateless by polygamy, who would object. Thus our immediate social dispensa-

tions are determined by mediocrities and inferiors. Polygamy is far more ethical than a policy which permits men to evade economic responsibilities. Even *The Outlook* (!) recently stated, editorially, that the peril to the country from plural divorces is much greater than the peril from plural marriages."

Morality, instead of determining the facts of life, is determined by them. The degree of one's morality is judged by the degree of one's monogamousness. The truth is, as Shaw says, that the foundation of the institution of monogamy is not any inherent viciousness in polygamy, but the hard fact that men and women are born in about equal numbers. The surplus of women is not sufficiently great to enable every man to have two wives. Then comes the economic difficulty of the tenth-rate men. In practice, however, the economic difficulty would not be insurmountable, for tenth-rate men are apt to be essentially monogamous and first-rate men are not numerous.

What we wish to make clear is that sexual incompatibility is the main factor in respect to marital discord, disguised under a dozen or more euphemisms. Rational analysis and reformation are tabooed by the moralists, so-called. There is not one but several, highest types of morality. Why should "men and women of the most various and antithetical temperaments and capacities obligingly conform to a single stereotyped standard?" We must cease insisting that types of men and women differing from our own stand for mere vagaries and aberrations. "Our standard for the appraisement of conflicting ideals must be ultimately an ethical and psychological, and, above all, a social standard."

HUMAN CONSERVATION.

Conservation of child life is one of the foundation stones of the future of the republic. The awful ravages of enteric diseases among our infants will be felt in the generations to come. The death rate has been scandalously high and is far too high to-day. Pure milk will lower the rate immediately and permanently. Pure milk is as easily obtainable as impure milk. Stricter legislative enactment and some vigorous prosecutions, with the "man higher up" as the victim, would go far toward bringing pure milk into our cities.

Facts count, so consider the milk facts of Montclair, N. J., a city of 22,000 people, who are keenly alive to civic necessities. The city is a model in many ways. When it tackled the milk question, it went at it in no uncertain manner. In consequence all of Montclair's milk is pure. With what result? During the intensely hot spell of July 1-21, 1911, only one baby under twenty-four months old died of a gastro-intestinal disease in Montclair. Had the Montclair system of milk inspection and distribution been in vogue in the following cities of 80,000-100,000, 4-5 babies would have died: Camden, N. J.; Dallas, Tex.; Des Moines, Ia.; Hartford, Conn.; Kansas City, Kan.; Lawrence, Mass.; Lynn, Mass.; Newton, N. J.; Reading, Pa.; Salt Lake City, Utah.

And these cities of over 100,000 would have lost babies as follows: Atlanta, Ga. (154,839), 7; Buffalo, N. Y. (423,715), 19; Chicago, Ill. (2,185,283), 99; Cincinnati, O. (364,463), 16; Cleveland, O. (560,663), 25; Columbus, O. (181,548), 8; Jersey City, N. J. (267,779), 12; Kansas City, Mo. (248,381), 11; Milwaukee, Wis. (373,859), 17; Newark, N. J. (347,469), 16; Pittsburgh, Pa. (533,905), 24; San Francisco, Cal. (416,912), 19; St. Louis, Mo. (687,029), 31; Rochester, N. Y. (218,149), 9; Detroit, Mich. (456,766), 22; Memphis, Tenn. (131,105), 6.

What Montclair can do every city in the country can do. If our infant life is worth preserving physicians and boards of health should hear opportunity knocking at their doors and bid him enter.

"CURE"—A FALLACY.

The patent medicine industry has waxed fat on the delusions of credulous people. The well springs of hope which bubble up in the breasts of mankind have made manufacturers of nostrums wealthy. A person suffering from some chronic ailment grasps at any straw so long as it is labeled with a medical name. He gets the experience, often of the sorriest nature, while the quack gets the money.

Men take patent medicines largely on account of their falsely extravagant claims of medicinal value. The advertisement announces that the nostrum will "cure" from one to forty diseases and the innocent and ignorant public is gulled into purchasing.

CURE is a word which reputable physicians use with the greatest precaution. The practitioner who claims he can "cure" a particular disease is a fakir and has no place in the profession. He can say that by various means at his disposal he *hopes* to effect a cure, but until medicine becomes an exact science no one can safely proclaim himself positively able to bring about complete recovery.

Physicians journeying to the sessions of the A. M. A. at Atlantic City were amazed at the effrontery of a patent medicine concern in announcing on huge signs that a certain nostrum "cures" eczema. The medical profession has found this disease most difficult to overcome, but the quacks have no hesitancy in claiming a "cure" in their nostrum. To those who know, the assertion that this patent medicine "cures" eczema is rankest nonsense and it should be made a serious offense to put forth such silly, misleading and at times harmful statements.

We would like to see a law on the statute books of every State in the union making a public claim of "cure" a penal offense. There is a movement started by *Printer's Ink* to eradicate the advertising fakir. If this will include the lying statements of the patent medicine man we will rejoice. If not let some Moses arise to lead a movement which will chase the men who say they can "cure" into some wilderness whence return is impossible.

Let us emphatically repeat that no reputable physician will guarantee a "cure."

"SWAT THE FLY."

This undignified but suggestively expressive title stands for a crusade against the disease-bearing house fly instituted by the American Civic Association. The part the insect pest plays in the spread of disease is fully appreciated by the medical profession, though, truth to tell, physicians have not been aggressive in demanding its "recall." The movement, in common with the progressive tendency of the age, is now fully under way, and the fly is doomed.

With its unlamented departure, one more source of contagion will be removed and we shall be that much nearer the medical millenium toward which we are being rapidly carried by the advance of science.

It is the duty of every physician and every board of health to assist in the passage of ordinances looking to the destruction of the fly and the prevention of means of propagation. Concerted action on the part of the various municipalities and common-

wealths would speedily put us in a position similar to the city of London, where the fly is almost unknown.

The fly is, to be sure, a danger signal, notifying us that filth in some form is near, but it behooves us to get rid of filth and its danger signal simultaneously.

Current Orientation

BRONZED DIABETES OR HEMOCHROMATOSIS.

The rarity of this disease makes the recent presentation of two cases by American physicians, one in New York and the other in New Haven, worthy of further consideration. The disease was first described in 1882 by Hanot & Chauffard (*Rev. de med.*), who wrote of two cases as bronzed diabetes with pigmentary hypertrophic cirrhosis, and since that time 55 positive cases have been recorded. It should be noted, however, that in 1871 Troisier described a case under the name "diabcte sucré. Two cases each were described by the following writers, in addition to the initial report by Hanot & Chauffard:

Jeanselme (*Le Presse Med.* 1897, No. 11); Dutournier (*Thèse de Paris*, 1895); Kretzl, (*Beit. zur clin, Med. Chir., Wien*, 1896, Heft 15); Létulle (*Soc. Med.*, Feb., 1897); Hess & Zurhelle, (*Zeit. f. Klin. Med.*, 1905, lvii, 349); Simmonds (*Berlin Klin. Woch.* 1909, No. 12); Cecil (*Jour. Exp. Med.*, 1909, xi, 275); Futcher (*Am. Jour. Med. Sci.*, 1907, cxxxiii., 78); Sprunt (*Arch. Int. Med.* 1911, vol viii, p. 75).

These men record one case each: Anschutz (*Deut. Archiv f. klin. Med.*, 1898-99, lxii, 411); Marie (*La Sem. Méd.* 1897, No. 27); Gonzales-Hernandez (*Thése de Montpelier*, 1892); Mossé and Daunic (*Gaz, hebd. de Méd. et de Chir.*, 1895, No. 28); De Massary and Potier (*Soc. Anatom.*, April, 1895); Castan and Imbert (*Montpelier medic*, 14 Mai, 1892; De-Massary and Rendu (*La Presse Méd.*, 1897, No. 11); Buss (*Inaug. Diss. Göttingen*, 1894); Wille (*Mitt. aus dem Hamburg. Staatskr.*, Band v.); v. Recklinghausen (*Tag. der Natur. zu Heidelberg*, 1889); Quincke (quoted by Anschutz); Barth (*Bull. de la Soc. Anat.*, 1888); Brault and Gaillard (*Arch. gén. de Méd*, 1888); Hanot and Saachmann (*Arch. de Phys.*, 1886); Troisier (*Bull. de la Soc. Anat. de Paris*, 1871, p. 231); Saunby (*Lectures on Renal and Urinary Diseases, Bristol, John Wright*, 1896, p. 321); Rabé (*Bull. Soc. Anatom. de Paris*, 1900, p. 459); Lépine (*Lyon Méd.*, 1903, c, 434, 593); Beattie (*Jour. Path. and Bact.*, 1903-04, ix, 117); Parker (*Brit. Med. Jour.*, 1903, p. 1052); Margain (*Revue de Méd.*, 1905, xxv, 214); Preiswerk (*Inaug. Diss. Basel*, 1905); Charante (Neider. Tydschr. v. Gneeskunde Anat., 1905, xli, 1727); Naunyn (*Diabetes Mellitus*, Wien, 1906, ii, Auflage, 241); Indemans (*Ned. Tyds, voor Genees.*, 1906, xlii, 682); Wyss (*Korr. f. Schweize Arzte*, 1899, xxix, 559); Martineck (*Charité Annalen*, 1909, xxxiii, 40); Ridder (*Deut. med. Woch.*, 1910, xxxvi, 1647); Lando (*Zeit. f. Heilkunde*, 1906, *Neue Folge* 1, p. 7, *Case* 6); Blumer (*Yale Med Jour.*, Nov. 1911); Sprunt (*Archiv. Int. Med.*, 1911, vol. viii, p. 75); Potter and Milne (*Am. Jour. Med. Sci.*, Dec., 1911); French (*Proc. Royal. Soc Med.* 1909-10, iii, Path. Sec. 94); Elmer (*Weekly Bull.* of the *St. Louis Med. Soc.* 1910, iv, 279); Bernouilli (*Correspondenzbl. Schweitz. Aerzte* 1910, xl. 610).

In addition to these 55 positive cases on record three, in which the diagnosis was doubtful, were reported by Heller (*Deut. med. Woch.*, 1907, p. 1216); Murri (*Wien. klin.* Rundsch., 1901, ii, 345); Palma (*Berl. klin. Wock.*, 1893, p. 815).

Hanot and Chauffard were of the opinion that the diabetes is the original lesion and that pigmentation followed haemolysis from blood changes produced by the disease. Their theory does not seem tenable in view of the rarity of the disease. The thought of to-day makes haemochromatosis, originally termed by V. Recklinghausen, in 1889, the original lesion, and the secondary changes in the liver and pancreas are believed to result from the deposition of pigment. Simmons, disagreeing with this belief, is of the opinion that cirrhosis and pigmentation come from the same cause. Toxins, producing a chronic haemolysis, are thought by some to be the cause of pigment formation, but Blumer dissents, remarking that the occasional occurrence of purpura or hemoglobinuria appears rather weak evidence of a hemolytic origin of the disease inasmuch as these manifestations occur at a time when so-called cachectic purpura or purpura due to terminal infection might readily occur. The comparatively small amount of pigment in the spleen is in itself a very strong argument against general hemolysis. One must admit the possibility of a local hemolysis confined to the portal system. The work of Ritchie seems to show that blood destruction taking place within the portal zone may lead to the deposition of pigment with its maximum deposit in the abdominal organs much as that which occurs in hemochromatosis.

Tutcher, expressing his own views in accord with those of Anschutz, Marie, Berg, Jeanselme, and others, thinks the pigmentation of the viscera is primary and antedates the diabetes, and that the deposition of the hemosiderin in the cells of the liver and pancreas and of the hemofuscin in the connective tissues of these glands eventually leads to the large, cirrhotic, pigmented liver and the sclerotic pancreas, which are so characteristic of the disease. This idea of hemochromatosis being the primary event is neither easy to understand nor to prove. It presupposes blood destruction from some unknown cause.

There is an iron deposit containing pigment in the tissues in other diseases, such as pernicious anemia. In fact only two established features may be certain to be found in bronzed diabetes, cirrhosis of the liver and sclerosis of the pancreas. Many writers place the blame for the hemochromatosis upon these two organs. Osler thinks the pigment is formed in the liver and disseminated from it to the other organs, while others, notably Blum and Rabé, feel that the suprarenals have much to do with the production of hemochromatosis.

There is a variety of opinion on the subject, and several physicians, Opie, Abbott, Létulle, Brault, Osler and Hintze, have described 11 cases of hemochromatosis and hepatic cirrhosis without the presence of diabetes. Blumer in discussing the differentiation of the disease, says that "the differential diagnosis can be simplified by pointing out that a combination of pigmentation with an enlarged hard liver and glycosuria is not likely to occur in any other condition. In vagabonds' disease and chloasma associated with pregnancy or with cachexia the distribution and character of the pigmentation, together with the presence of the usual causal factors and the absence of hepatic enlargement and glycosuria, should make the diagnosis simple enough. Addison's disease with diabetes might be puzzling, but the association of Addison's disease with diabetes only occurs once in 800 cases of Addison's disease. Furthermore the enlarged liver would not be present. Pigmentation from various drugs, such as arsenic and silver, would likewise be unassociated with diabetes and an enlarged liver. The same is true of scleroderma, where the pigmentation occurs in advanced cases with marked skin lesions. Pigmentary syphilis is associated with areas of depigmentation, and is more patchy. Basedow's disease with diabetes and pigmentation might be hard to differentiate if the patient also had an enlarged liver."

Potter & Milne contribute a report of one of the latest cases of this disease (*Am. Jour. Med. Sci.*, Dec., 1911). The patient, a man of 55, first came under observation in March, 1908. His early history was good, but during the previous three years he had been troubled with cough, dyspnea and insomnia. His skin was pale, yellowish brown and dark for a

blond man. The spleen was enlarged. During the next four months after examination the urine varied from 1.500 c.c. to 2,900 c.c., once reading 4,400 c.c., containing 33.75 grams of sugar. In November, 1908, the color of the face, dorsum of hands, the axillæ and around the genitals had darkened considerably. Up to January 25, 1909, the urine ran from 1,550 c.c. to 6,800 c.c., with sugar from 4 grams to 340 grams. Edema of the legs and ascites developed, with sciatica in both legs, until in December, 1909, the swellings were marked. The bronzing was much the same but more leaden in color. The heart was dilated, with systolic murmur, and blood pressure was 130. The man gradually failed and died April 10, 1910.

Upon autopsy the skin showed a general faint brownish discoloration, especially on the back of the hands, the axillæ, genitals and face, which in places was bluish. The heart was dilated, very friable, coronary arteries sclerotic and aorta atheromatous. There were eight quarts of yellow fluid in the abdominal cavity.

The liver was enlarged, dark brown in color, particularly in the parenchymatous islets. The fibrous tissue intersecting these islets was in considerable amount, dense, and congested.

The pancreas was very small, densely embedded in fat so that it could not be shelled out. It was largely replaced by fibrous tissue, where little pancreatic tissue remained. The kidneys were enlarged, but showed no chronic nephritis.

Upon microscopic examination there was seen a considerable deposit of yellow pigment in the deep layer of the skin. The liver showed an old standing cirrhosis and the deposit of pigment was extensive. The spleen was in a state of advanced venous stasis, but pigmentation was small, as it was in the kidneys.

The pancreas was very extensively replaced by inflammatory tissue and by fat. The vessels in the interior of the organ showed no special change, and the ducts, although catarrhal, were not dilated or obliterated by fibrous tissue. The parenchyma seemed to have been largely destroyed, but the portions which persisted among the inflammatory tissue were isolated as small rounded groups of acini. At first sight, all that seemed to have been spared were islands of Langerhans. The majority of these pancreatic remnants, however, were obviously acinous tissue, yet many also were definite islands of Langerhans. These latter appeared to be in considerable number, and many of them were well preserved. For the most part, they were larger than normal, although their number probably was less. In many places there were clumps of cells where it was almost impossible to differentiate between acinous and island tissue.

These transition figures in the pancreas, although they can only be accepted with some reservations, are particularly interesting.

As the result of experimentation and observation on the part of many men, including Potter and Milne, they reach the conclusion that the pancreas is not merely an organ secreting digestive enzymes, but has also important relations in carbohydrate metabolism. It does not seem to have any special relation to the formation of glycogen, as it has been shown that glycogen is formed in diabetes. It may be that the pancreas involves some internal secretion which regulates sugar destruction, yet, even more likely, it eliminates or destroys substances which when accumulated in sufficient degree by retention in the system, on account of deficient pancreas activity, are capable of producing abnormal disintegration of glycogen, etc., in the tissues and consequent diabetes. In the present case it is of interest to note that pigmentation did not show for several years after evidences of hepatic cirrhosis and diabetic symptoms had appeared. Potter and Milne conclude by saying:

"The pathological records of our case argue against the theory that the pigment accumulation is the cause of the inflammatory process in the various organs because the pigment evidently was largely deposited in the spared parenchyma cells of the liver and pancreas, and to a relatively much less extent in the connective tissues of these organs. The kidneys, thyroid, heart, etc., were all extensively pigmented, yet were hardly at all involved in any cicatricial process. It is doubtful, indeed, if blood pigment has any marked tendency to cause inflammatory processes.

"From what may be gathered in the literature and from the study of our own case, it would seem as if to-day we are warranted in stating only that cirrhosis of the liver is the primary condition; that pancreatic involvement with diabetes is a sequence or coincident event to this; that the hemochromatosis, always in slight degree in liver cirrhosis, is in some cases very excessive and causes a general pigmentation which eventually also involves the skin; and finally, that the whole process is not any definite symptom complex, but a chain of circumstance which rarely seems to be completed."

Blumer's case (*Yale Med. Jour.*, Nov., 1911), presents some different characteristics. The patient, a male, 67, was taken ill in July, 1910, and was admitted to the New Haven hospital December 12, 1910, with a diagnosis of diabetic coma. In addition to other symptoms there was brownish pigmentation of the forehead, hands, arms and legs and the next day a petechial eruption was noticed on the legs and several suggilations over the arms. The man died less than 48 hours after entering the hospital and about five months after the initial date of illness.

Upon autopsy the abdomen was found to contain 1,000 c.c. of yellow serum. The heart was enlarged, the aortic cusps were calcified, as were the coronary arteries. There was miliary tuberculosis of the peritoneum, brown pigmentation of liver, pancreas, and lymph nodes, with chronic interstitial hepatitis and pancreatitis.

On microscopical examination the most noticeable thing in the heart was the brown pigmentation. The liver showed marked cirrhosis with pronounced tissue pigmentation.

The pancreas showed more interlobular fat tissue than is common. In addition there was some increase in the connective tissue of the organ, much pigmentation and certain changes in the Islands of Langerhans. The Islands of Langerhans were made out with some difficulty. In the relatively small number that were best preserved the chief change from normal was a swelling of the capillary wall underneath the endothelium. Other islands show a more marked increase in connective tissue. In still other islands there is a change in a part of the cells. The pigment was present in the cells and the connective tissue in abundance, in the Islands of Langerhans as well as in the other parts of the pancreas. The stomach showed chronic gastritis with pigmentation. The kidney showed a slight increase in connective tissue in the cortex with a little arteriosclerosis.

It will be seen that the pigmentation in this case differed from Potter and Milne's and indeed this symptom is variable. It is described as yellow, blue-black, dirty gray, brown yellow, gray-black, gray-brown, but all observers are a unit in noting the presence of pigmentation on the exposed parts of the body, the backs of the hands, face, forearms and legs, although Blumer's case is the exception which proves the rule, as pigmentation of the forehead was not uniform. This case was, however, quite typical.

Blumer is of the opinion, while we cannot deny the possibility of the occurrence of diabetes, or of an enlarged liver, as a complication in various diseases, associated with pigmentation of the skin, the likelihood that the triad of symptoms and signs will occur outside of bronzed diabetes is very small.

If blood is vomited in large quantity it is important to distinguish, by the history and physical signs, between gastric ulcer and ruptured varicosities of the esophagus.—(*Am. Jour. Surg.*)

The American Medical Association

The sixty-third annual session of the American Medical Association held in Atlantic City, June 3-7, was in many respects one of the most helpful meetings in the association's history. The attendance was large and the papers were of unusual value. The delightful weather added to the charm of the occasion and Atlantic City, as usual, demonstrated that it is the country's convention city par excellence.

At the election of officers, Dr. John A. Witherspoon, Professor of the Practice of Medicine in Vanderbilt University, Nashville, Tenn., was chosen president—a notably good selection. The other officers elected are: First vice-president, Dr. Philander Harris of Paterson, N. J.; second vice-president, Dr. John L. Heffron of Syracuse, N. Y.; third vice-president, Dr. H. M. McClanahan of Omaha, Neb.; fourth vice-president, Dr. Walt P. Conway, Atlantic City; secretary, Dr. Alexander R. Craig, Chicago; treasurer, Dr. William Allen Pusey, Chicago; trustees, Dr. M. L. Harris, Chicago; Dr. C. A. Dougherty, South Bend; Dr. W. T. Councilman, Boston; Member of the Judiciary Council, Dr. George W. Guthrie, Wilkesbarre, Pa.; Member of Council of Health and Public Instruction, Dr. Walter B. Cannon, Boston; Member of Council on Medical Education, Dr. James Holland, Philadelphia; Dr. W. D. Haggard, Nashville, Tenn.

Minneapolis was selected as the next place of meeting.

Comment was caused by some of the remarks of President Jacobi on the subject of proprietary infant foods. He is reported to have said he did not leave his practice to go to Atlantic City to learn about these foods. He thought the exhibit hall should be free from such products and be confined to instruments, books and the like. Some of the exhibitors were aggrieved at this statement, as they had paid liberally for the purpose of displaying their goods.

He is also alleged to have said that one food is likely to cause serious results when fed to infants and that he had been waiting many years to announce the fact. Dr. Jacobi's high standing as a pediatrician gives weight to his words and the profession will welcome an authoritative statement from him on the subject. If physicians are using a food for babies that is injurious they should be so advised.

The scientific program of the A. M. A. was one of the most practical in years. Herewith are presented very brief abstracts of some of the articles read before the several sections.

Practice of Medicine.

Clinical Observations on an Epidemic of Sore Throat Due to Streptococcus.—J. A. Capps and J. L. Miller, Chicago.—Unusually large number of cases of sore throat in Chicago this winter. Constitutional symptoms severe and out of proportion to local inflammation. Cervical adenitis a very common sequel. Other complications: pleurisy, pneumonia, arthritis, peritonitis, endocarditis, otitis media and bronchitis. Cultures from throat and exudates showed a streptococcus of peculiar character. It has a capsule, grows in chains, and is hemolytic. Evidence presented to show that the origin of the epidemic was probably from milk.

Hunger Pain.—A. A. Jones, Buffalo, N. Y.—The characteristics of hunger pain and the conditions in which it occurs. The diagnostic value of the symptom. It may be a misleading clinical manifestation and should always be investigated before being put down as conclusive evidence of hyperchlorhydria or ulcer. Its greatest significance. The treatment of the symptom and of the underlying disorders.

Constrictions of the Bowel: Demonstration and Clinical Significance.—G. E. Pfahler, Philadelphia.—Constrictions may be spasmodic or due to new growths or adhesions, kinks, twists, the pressure effects of tumors, or an excessively long sigmoid flexure. They are demonstrable by means of the X-rays and the amount of interference with the normal functions can thus be determined. Effects vary with extent and location of lesion; may occur spasmodically or continuously; and may vary from moderate constipation to complete obstruction.

Surgery.

Results of Operations, Especially Abdominal, Performed on the Principle of Anoci-Association.—G. W. Crile, Cleveland.—In the body there are large stores of potential energy. This energy is released and converted into action through associative memory. Associations (stimuli) may be beneficial (benc-association) or they may be harmful or nocuous (noci-associations). Surgical operations usually performed cause noci-associations. By special technic operations may be performed without noci-associations—this neutral state is designated anoci-association. Especially in abdominal operations, in operations for Graves' disease and in handicapped patients remarkable results are achieved. General operative mortality is reduced and postoperative impairment is greatly diminished.

Experimental Intestinal Obstruction.—J. A. Hartwell and J. P. Hoguet, New York.—Review of findings reported by writers in *The American Journal of the Medical Sciences*, March, 1912, on high intestinal obstruction. Experiments with low obstruction along same lines as those there reported, showing close correspondence between the two conditions. The determination of amount of water excreted by kidneys and in vomitus, with study of chemistry of these excretions. Effect of administration of sufficient quantity of saline solution, subcutaneously, often nearly one-tenth of the body weight per diem, to prevent actual loss of water from tissues. Animals, with moderately high intestinal obstruction, so treated, resemble animals in normal starvation, and apparently life may be as long maintained as in simple starvation. These findings seem to point to loss of water, and not absorption of toxic substances, as ultimate cause of death from untreated intestinal obstruction. This does not hold true where any strangulation of intestinal wall is superimposed on obstruction.

Colonic Intoxication.—J. F. Binnie, Kansas City, Mo.—Results of sudden cessation of active exercise practically same as symptoms of mild colonic intoxication, though brought about in a different way. May be avoided by exhibition of brisk cathartic at end of period of muscular activity. Large intestine principal site for absorption of liquids. If feces stay too long in colon, if mucosa is too permeable, if putrefaction changes or errors in diet increase toxicity of feces then more toxins may be absorbed than can be properly attended to by purifying organs. Want of balance between absorption and purification or elimination results in intoxication. Symptoms produced, general and local. Among general symptoms Hoxie's observation regarding staining of certain polymorphonuclear corpuscles in blood with Wright's stain seems important and demands further research. Fever and localized muscular rigidity indicate some inflammatory lesions which may or may not be a complication or sequel of intoxication or of cause of intoxication.

Diverticula of the Gastro-Intestinal Tract and Their Surgical Importance.—C. H. Mayo, Rochester, Minn.—Diverticulitis much more common than formerly supposed. Probably the most common gross lesion of the large intestine. Evidently has been frequently mistaken for cancer and probably really is the base on which develop a certain per cent. of cancers of the large bowel. Necessity for great care in clinical diagnosis and also in diagnosis at operation. Many cases undiagnosable except by careful study of tissue after its removal. Importance in prognosis. Disease essentially of single or multiple hernias of the mucosa through the muscular coats of the bowel. Contracting inflammatory deposits. Perforations, abscesses, etc., secondary. Necessity for and methods of varying operative procedure to meet exact conditions present.

Relation of the Genital Organs to Internal Secretions.—E. L. Opie, St. Louis.—The development of secondary sexual characters depends on influences exerted by the testicle or the ovary and, in accordance with views of many observers, on the integrity of certain cells within these organs. There is some evidence that these glands influence general metabolism. Reciprocal influences between the ovary or testicle and the ductless glands, namely the thyroid, pituitary and thymus, have been claimed and infantilism dependent on defects of various internal secretions have been described. Particularly noteworthy are the experimental studies which indicate that the thymus gland modified the development of the sexual organs, whereas these organs influence the condition of the thymus.

The Anatomic and Physiologic Effect of Iodin on the Thyroid of Exophthalmic Goiter.—David Marine, Cleveland.—Recent evidence strongly indicates that the thyroid gland does not play

a primary rôle in the production of this symptom-complex. Anatomic changes in the thyroid gland neither constant nor specific. Studies based on iodin contents of such thyroids have given results similar to those found true for goiter in general. The administration of the thyroid of exophthalmic goiter to animals produces the same effects that are obtained from the administration of thyroid of other clinical associations with like iodin content. Feeding of thyroid of exophthalmic goiter to patients with cretinism or myxedema or to patients with complete exophthalmic syndrome produces the same results that other forms of desiccated thyroid of like iodin content do.

A New Method of Suturing Blood-Vessels.—J. S. Horsley, Richmond, Va.—The chief need for suturing blood-vessels is often found in emergency work, and it is just this class of surgery where the delicate manipulations so necessary in successful suturing of blood-vessels are often impossible. The new instrument used in this method practically a substitute for trained assistant and enables the sutures to be held at proper angle and at the same tension throughout the operation. The method utilizes the continuous mattress suture, which makes very even approximation of the intima. Several specimens exhibited show the result of the method. This method is particularly recommended in transfusion of blood where the artery is liable to contract on account of exposure, as by introducing a small probe through a branch of the vein the artery can be dilated easily.

Obstetrics and Gynecology.

Hysterotomy.—J. B. Deaver, Philadelphia.—Aside from its use in the operation of cesarean section, hysterotomy is occasionally of great value as a diagnostic procedure to determine (a) the source of intractable uterine hemorrhage of doubtful origin, such as may accompany small benign uterine polyp and pedunculated myoma; (b) to differentiate between pregnancy and symmetrical soft myoma. By hysterotomy one can deal satisfactorily with polyps of the endometrium, pedunculated intra-uterine growths and at times submucous myomata can be enucleated and the uterus preserved in cases in which it is especially desirable to do so. Curettement through hysterotomy can be made more complete than with the ordinary technic. It is not an operation to be practiced in any but selected cases and never when intra-uterine infection is demonstrated or suspected.

[This paper occasioned some criticism and the author stoutly defended his position. Ed.]

Inflammation of the Fallopian Tubes.—H. J. Boldt, New York.—The causes of salpingitis are, principally, infections from some source. We may have inflammation of the fallopian tubes without marked symptoms being present; indeed, frequently none at all. Care must be used before undertaking any minor surgical intervention on the uterus, or an intra-uterine application, to ascertain by bimanual examination that no tubal disease is present. The menstrual abnormalities in connection with salpingitis are not typical; in some instances marked changes occur, but in others none are present. Recto-vagino-abdominal palpation should be used for the purpose of making more accurate diagnoses. The prognosis, so far as life is concerned, is generally good, instances of maligant disease excepted, but so far as concerns a *restitutio ad integrum*, the prognosis is doubtful. The treatment depends on existing conditions, particularly the symptoms in chronic salpingitis.

Pulmonary Tuberculosis Complicating Pregnancy.—C. S. Bacon, Chicago.—Changes in last seven years—since Portland meeting: greater attention to all tuberculous patients and especially gravidæ. Development of methods of diagnosis. Increase in therapeutic abortion and in sterilizing operations; hysterectomy. Estimate remains about the same, one in eighty gravidæ. Effect of pregnancy on the progress of the disease. Labor and the puerperium frequently harmful. Management. Marriage of tuberculous girls and conception in tuberculous wives should be discouraged. Artificial sterilization is justifiable; best by tubal section. Gravidæ should be continually watched like all tuberculous patients. Labor must be watched carefully. The first weeks of the puerperium are very important. The mother must rest and should not nurse or care for the child.

Cardiac Complications of Pregnancy and Labor.—F. S. Newell, Boston.—The reaction of the normal heart during pregnancy shows that a considerable strain is developed during pregnancy. This strain is increased in labor. Valvular heart disease shows a considerable mortality, varying with different observers during pregnancy and labor. (1) Acute endocarditis during pregnancy. (2) Chronic endocarditis with valvular lesions. Frequency and symptoms. The propriety of marriage and child-bearing in (1) patients with valvular lesions who have never suffered from a failure in compensation; (2) in patients with lesions who have had failure in compensation, with particular reference to the impossibility of estimating the power of response of the cardiac muscle. The care of patients with valvular lesions during pregnancy and labor; (3) acute dilatation of the apparently normal heart; (4) myocarditis during pregnancy and labor.

Difficult and Dangerous Labors.—H. A. Miller, Pittsburgh.—Broadly speaking there is but one positive indication for cesarean section, viz, the inability of a child of given size to pass the birth canal safely. Absolute indications of this character can usually be determined but relative pelvic contractions frequently result in spontaneous deliveries. It is only by a reasonable test of labor that these cases can be determined, being careful to conserve the patient's strength, anticipate uterine ruptures and avoid frequent examinations with their attendant dangers. Application of forceps on a floating head should seldom be done, unless failure to engage is due to causes other than a disproportion between the passenger and passages. Cesarean section is justifiable in a certain small proportion of cases with an undilated os and central implantation of the placenta. In eclampsia the severity of the condition, parity of the mother, length of gestation and condition of the os should determine the method of delivery.

Treatment of Tubal Gestation.—L. J. Ladinski, New York.—Patients do die from internal hemorrhage the result of tubal rupture. Shock and collapse are no contra-indications for operation. Added shock due to operation is so slight that it does not justify delaying operation. The earlier after rupture the operation is performed the better the prognosis and the shorter the convalescence. The longer the patient is allowed to bleed and to continue in shock the less favorable the prognosis and the longer the convalescence after operation. No guide by which to determine in advance what cases will cease to bleed and what cases will not; or in what cases shock will subside or cause death pending operation. Results of immediate operation absolutely justify the procedure.

Pharmacology and Therapeutics.

Candy Medication.—Bernard Fantus, Chicago.—Candy is the ideal form in which to present medicine to children, fastidious women and to some of the insane. Troches, official medicated candy, have, on the whole, been a failure, excepting perhaps santonin troches. Readily disintegrating tablets, made with sugar as diluent and with pleasant aromatic flavor furnish a delightful form for the administration of tasteless or almost tasteless drugs, not only calomel and phenolphthalein, but also a considerable number of others.

Effect of Iodids on the Circulation and Blood-Vessels.—J. A. Capps, Chicago.—The extensive use of iodids in arterial disease is largely based on the grounds: (a) that they lower the blood-pressure and (b) that they retard the progress of arterial disease. Animal experiments are somewhat conflicting, but in the main show little change in blood-pressure from injections of iodids. Clinical observations also fail to demonstrate any constant effect of iodids on arterial pressure. The action of iodids on the diseased wall can not be satisfactorily proved, but is supported by abundant clinical testimony. Relative values of organic and inorganic preparations of iodids.

Clinical Observations on the Duration of Digitalis Action.—Carey Eggleston, New York.—With the knowledge that digitalis is "cumulative" in man and that its action can be shown to persist for long periods of time in animals, the clinical observations embodied in this paper were made on patients, who were under digitalis treatment by various clinicians, to demonstrate the duration of digitalis action in man. The results show a variable but considerable duration of action after the therapeutic use of the drug, and suggest this as part of the phenomenon of "cumulation."

Pathology and Physiology.

Nature of Pneumococcus Infection and Immunity.—Rufus Cole, New York.—Discussion of recent advances in our knowledge of the biologic aspects of pneumococcus infection, considering especially the following three phases of pneumonia: onset of the disease or infection, the clinical disease itself or the intoxication, and the mode of recovery or immunization. Evidence that the primary factor in the production of pneumonia is a decreased local resistance. Evidence that the intoxication in pneumonia may be due to products arising from the splitting of the bacterial protein, owing to the action of either complement or ferments contained within the bacteria. Possibility that the intoxication is due to preformed substances set free on disintegration of the bacteria. Relation of the intoxication to anaphylaxis. Nature of the crisis. Theory that it

represents a kind of cumulative anaphylactic reaction followed by a refractory state. Mode of action of immune serum and chemotherapeutic substances.

Blood-Pressure Observations in Epidemic Meningitis.—A. Sophian, New York.—Blood-pressure observations in epidemic meningitis during different stages of the disease. Blood-pressure in other forms of meningitis. Effect on blood-pressure of removing fluid by lumbar puncture, in epidemic and other forms of meningitis. Effect on blood-pressure of injecting serum. Old method of injecting serum; its dangers. Advantages of using blood-pressure as a control in injecting serum. Average dose of serum, as controlled by blood-pressure. Reaction following this method. Treatment of untoward symptoms, while injecting serum. Mortality figures among 185 cases of meningitis, treated in the City Hospital, Dallas, using this method.

Recent Advances in Our Knowledge of Measles.—J. F. Anderson and Joseph Goldberger, Washington, D. C.—Previous to 1911 it had been almost the universal opinion among laboratory men that the monkey was not susceptible to measles. In June, 1911, we reported the successful inoculation of rhesus monkeys with the blood of human measles drawn from the general circulation early in the eruptive period. Further studies were made on the period of infectivity of the blood, the nature of the virus in the circulating blood, and on the infectivity of the secretions and "scales" from human cases of the disease. The scales were not found to be infective for monkeys. The nasal and buccal secretions were found to be infective during, at least, the first forty-eight hours of the eruptive period.

Investigation of the Therapeutic Value of Camphor.—J. D. Heard and Clyde Brooks, Pittsburgh.—Clinical investigation on the effect of the hypodermic administration of camphor in oil on the systolic and diastolic blood-pressures, rate and character of the pulse and rate of respirations. Injections were given both to normal individuals and to those with various cardiovascular abnormalities, including ten patients with auricular fibrillation. No distinct changes were observed. Laboratory investigations failed to cause a distinct rise in blood-pressure or any increase in the rate or the amplitude of the heart beat, except in one moribund animal, in which mild convulsive seizures were also produced. Perfusion of the isolated heart of the cat with saturated solution of camphor was without effect on the normal strongly beating heart, but in two instances the fibrillating heart was restored to normal rhythm. The dose, however, was relatively larger than that used clinically.

Stomatology.

Origin and Progress of the National Oral Hygiene Movement.—Richard Grady, Annapolis, Md.—It is due to the historic verities of a movement of such importance that some record should be preserved. Inspired in the A. M. A. in June, 1900, by a paper presented by the writer on "Co-Operation of the Public Schools in Teaching Good Teeth, Good Health," and set in motion by the National Dental Association in July, 1900, by the creation of a Committee on Oral Hygiene in our Public Schools, at the instance of the writer, who was appointed chairman. Historic summary of the early work of the committee with a statement of its purpose and plans. Rapid progress of the movement in the last twelve years. Intelligent encouragement and assistance given in many places in the United States. Statement of what has been done in other countries to foster oral hygiene.

Unclean Mouths.—M. H. Fletcher, Cincinnati.—Uncleanliness of the mouth, indirectly, is probably the cause of more bodily disease than any other one source. Chronic ulcerative stomatitis, putrid sore mouth, fetid sore mouth, etc., as described in works on medicine, and as spoken of by practitioners, are simply stages of a disease of the alveolar process and gums which is caused by irritants such as tartar, bands, rough fillings, etc. These various stages should be described under the name Riggs' disease or alveolitis, since this allows of giving the morbid anatomy, treatment, etc., in a way it is now done. The pockets formed into and about the sockets of the teeth, by the inroads of infectious bacteria, form veritable hotbeds for microbes. This unsanitary condition of the mouth and source of disease is entirely preventable by proper daily care.

Iodoglycerol in the Treatment of Mouth Infections.—E. S. Talbot, Chicago.—Iodin, as a germicide, needs no comment. Frequent use of the official preparation destroys the mouth mucous membrane. The use of the following, called iodoglycerol, as a substitute: Water, 10 gm.; zinc iodid, 15 gm.; iodin (crystals), 25 gm.; glycerin, 50 gm. Public school children's mouths should be treated once a week, during the school term, with iodoglycerol to prevent contagions and infections. Its use in caries, necrosis, osteomyelitis and alveolar abscesses is highly recommended.

Dermatology.

Cancerous Degeneration in Chronic Leg Ulcer.—W. S. Gottheil, New York.—Though all the conditions favoring the development of cancer are present in these very common ulcerations (old age, extreme chronicity, neglect of the worst kind, plus infection, maltreatment, etc.), it is of extremely rare occurrence. Ten cases only are recorded, to which I add two. Its characteristics are: papillary outgrowths of the epithelia beginning at the margins of the ulceration, gradually invading the base, and assuming the appearance characteristic of the fungating and infiltrating carcinoma, or apparently innocent tumor masses which grow slowly for a long time before they begin to break down.

Administration of Salvarsan in Syphilis.—J. A. Fordyce, New York.—Immunity in syphilis. The rarity of reinfection explained by failure to cure the primary attack. Growing frequency of second attacks of the disease since the employment of intensive salvarsan and mercurial treatment. The efficiency of the modern methods as compared with the old. The abortive treatment of syphilis. Involvement of the nervous system in the early stages of lues. Neuro-recurrence after insufficient treatment. The use of salvarsan in metasyphilis. The permanency of results in cases in all stages of lues observed for from one to one and a half years. The importance of faultless technic in the preparation and administration of the drug. The elimination of a general reaction by the use of freshly distilled water. Dosage and repetition. Precautions to be taken in the treatment of cerebrospinal, arterial, cardiac and renal diseases in alcoholic subjects.

Preventive Medicine and Public Health.

Classification of Occupational Diseases.—W. G. Thompson, New York.—Nomenclature of (a) the hazardous industries; (b) the injurious substances employed; (c) the occupational diseases. Classification. Importance of cooperation in adopting standards. Illustrations and difficulties of standardization. Instruction of physicians in the matter, through state boards of health and labor bureaus. Various systems of classification, foreign and American. The relation of classification to legislation and the collection of scientific data.

Occupational Skin Diseases.—J. A. Fordyce, New York.—The effect of various irritants on the skin. The commoner dermatoses, as eczema, boils, callosities and ulcerations occurring in the ordinary trades. The dangers to tar and paraffin workers. The cutaneous eruptions encountered in people who follow an outdoor occupation, as drivers, coachmen, farmers and seafaring men. The relation of certain callings, notably those dealing with live or dead animals or their products, to the development of parasitic diseases, such as pyogenic infections, tuberculosis, anthrax, glanders, actinomycosis, erysipeloid, sporotrichosis, ringworms, etc.

Occupational Neuroses.—C. L. Dana, New York.—The author refers to the relative frequency of nervous and mental diseases among laboring classes. He gives a summary of the principal occupational neuroses, including both those due to manual work and to the poisons. Description of the occupations which are especially associated with psychoses. Psychoses due rather more to bad economic industrial conditions than to any special kind of employment.

Need of Cooperation in Promoting Industrial Hygiene.—H. R. Seager, New York.—Of the different groups of persons concerned with industrial hygiene, physicians obviously are the most important. The prevalence of industrial diseases can only be determined through examinations by competent physicians of the employees exposed to industrial poisons. Employers may facilitate these examinations, employees may lend themselves to them, social workers may devise means by which the medical examiner and the patient are brought together, but the physician who makes the medical examination is the chief performer. This makes it indispensable to real progress in our effort to promote industrial hygiene that physicians cooperate with social workers to secure the body of exact information in regard to the prevalence of industrial diseases which we now lack.

Typhoid Vaccination in the Army.—Maj. F. F. Russell, U. S. A., Washington, D. C.—Intended to show the feasibility of inoculation of large numbers of people, the harmlessness of the method, the high degree of protection obtained and the feasibility of vaccinating in the presence of an epidemic.

Ophthalmology.

Sympathetic Optic Neuritis.—E. S. Thomson, New York.—Optic neuritis as the result of sympathetic inflammation occurs in two clinical forms, of which the commoner is associated

with iridocyclitis. More rarely it occurs as a simple neuritis, or neuroretinitis without uveal involvement. About twenty cases have been reported, of which the earlier ones are briefly quoted. Sympathetic neuritis is usually a benign affection if enucleation is performed early, but total atrophy is apt to supervene if enucleation is delayed. The cases of so-called sympathetic atrophy are most probably secondary to neuritis. While the condition occurs but rarely, the possibility of the occurrence should always be borne in mind, and patients who refuse to have a wounded degenerated eye enucleated should always be under observation.

Normal Values of the Accommodation at All Ages.—A. Duane, New York.—This is an attempt to determine the accommodative power at all ages from 8 to 68, and the limits within which this power may vary in normal cases. Some 1,300 subjects have been examined, and after rejecting all cases in which the results were uncertain, or vitiated by some abnormality of the conditions, there still remained over 1,000 that could be utilized. The results showing the amount of accommodative power and its decline from year to year, are presented both graphically and in the form of a table. The graphic delineation shows that the decline takes place in a curve of quite regular form, differing somewhat from curves obtained in previous investigations. As compared, however, with results presented by the author to the Association three years ago, the changes are comparatively trifling. Moreover, we now seem to have reached the point where the addition of each hundred cases makes no appreciable difference in the results.

Dangers to and Requirements of the Eyes of the National Marksman.—J. A. Donovan, Butte, Mont.—The number of qualified marksmen in our army and navy is more than fifteen times that of six years ago. The ranges are from 200 to 1,000 yards; size of bull's-eye in use, 8 to 36 inches, giving visual angle of from 4′ to 3.33′. Three theories regarding seeing the sights and target at one time: each has many advocates. Author maintains last theory. 1. The rapid succession of accommodation. 2. Theory of continuous retinal impression. 3. While looking at target, both sights seen with accommodation suspended. Most danger to marksman's eyes from overstrain, effects of lights, and small specks from back fire. Large lenses fully correcting the ametropia, colored to protect eyes in bright light, should be constantly worn.

Laryngology, Otology and Rhinology.

Ethmoiditis a Common Sequel of Hay Fever.—F. C. Todd, Minneapolis.—Hay fever is caused by the pollen of certain grasses, grains and weeds. It affects susceptible individuals when applied to any absorbing area, whether it be the mucous membrane of the eyes, nose, mouth, throat or rectum, and is an intense and fatal poison to such susceptible patients when given in even minute doses hypodermatically. Symptoms are general as well as local, though eye symptoms and nose symptoms predominate, because here the poison gains its easiest access. During the attack swelling takes place in the nose, causing defective drainage and ethmoiditis or pansinusitis. Repeated attacks may result in chronic sinusitis and persistent swelling of the middle turbinate. As a consequence of swelling of the middle turbinate body with or without ethmoiditis, reflex asthma develops which lasts as long as these conditions persist, even after the end of the hay-fever season, and if the nasal hypertrophy and ethmoiditis become permanent and chronic, the asthma may become likewise permanent and chronic.

Salvarsan in Lesions of the Nose, Throat and Ear.—C. R. C. Borden, Boston.—Specific lesions of the nose and throat yield the most satisfactory results, regardless of the stage of the disease. Indications and contra-indications. Two different systems in use at the Boston City Hospital. Intra-muscular and intravenous administration. Large and small doses. Iodids and mercury in conjunction with salvarsan. Phenomena occurring within the first few hours after intravenous method. Untoward results. Aural symptoms occurring after use of salvarsan. Report of eight cases of specific lesions of nose and throat ranging from early mucous patches to severe tertiary lesions; and of two cases of transient involvement of the organ of hearing.

Treatment of Chronic Laryngeal Stenosis by Prolonged Intubation.—Homer Dupuy, New Orleans.—The problem of the pathology of such obstructions in children awaits solution. We know that spasms of the abductors is extremely rare. We know the neoplastic formations such as papilloma and granulations are responsible for only a few stenoses where the picture points to a rapid development in the obstruction. While the last word has not yet been said in the mastery of this unfortunate condition, laryngotomy would seem to find a field of usefulness in selected cases. But in children, particularly those under five years of age, gradual systematic and continuous dilatation with the fixed tube and screw pin arrangement hold out a promise of success. Hypertrophic subglottic laryngitis offers the most plausible explanation. Whether or not this infiltration in the subglottic region is always a postdiphtheritic development remains unanswered. Personal experience in over 100 intubations incline me to the conclusions that my prolonged tube cases were, with few exceptions, not of diphtheritic origin. The clinical and microscopic features rather indicated subglottic laryngitis.

Diseases of Children.

Long-Interval Feeding of Premature Infants.—J. C. Litzenberg, Minneapolis.—Short interval feeding of premature infants is almost universally recommended, owing no doubt to the accepted belief that their caloric needs are proportionately greater than those of mature infants, and that the best way to supply this demand is to feed small quantities of mother's milk frequently. Here is presented a series of cases in which three, four and even five-hour intervals were employed from the beginning with less digestion disturbance, less cyanosis, no greater initial loss, and just as rapid gains and with less care and anxiety than with short interval feeding.

Intestinal Toxemia in the New-Born.—J. L. Morse, Boston.—Baby, normal at birth, becomes suddenly sick on the second, third or fourth day; is unduly quiet or shows marked symptoms of nervous irritation. Temperature is moderate. Meconium has usually not all been passed. Symptoms are probably due to toxic absorption from the intestine as the result of a bacterial infection of the meconium occurring soon after birth. Recovery prompt when intestines are thoroughly cleaned out. The condition is usually mistaken for other diseases.

Idiosyncrasy to Hens' Eggs.—O. M. Schloss, New York.—The idiosyncrasy of certain individuals to eggs has been recognized for a long time, but the condition is more common than is usually supposed. The symptoms caused in susceptible individuals by the ingestion of eggs are (a) gastro-intestinal, (b) cutaneous and (c) general. In the individual cases the symptoms are usually combined. Report of personal and collected cases. Former theories of the toxic action of eggs. Recent experimental work on anaphylaxis indicates that the underlying cause of the idiosyncrasy is protein sensitization or hypersusceptibility. Reaction probably dependent on the sensitization of the skin. The blood or blood-serum of some cases of egg idiosyncrasy contains a reaction body capable of sensitizing guinea-pigs to egg-white. The hypersusceptibility to egg may be inherited or acquired. Treatment by the administration of the antigen by mouth. Complete immunity thus established.

Raw and Boiled Milk in Infant Feeding.—Joseph Brennemann, Chicago.—Raw and boiled milk present striking differences. Deductions made from the use of one cannot be applied wholly to the other. Conflicting views of Continental and American pediatricians. The "hard" curd, as an example—a raw milk phenomenon. Its etiology and clinical significance, and its bearing on the question of casein digestion. Experimental and clinical evidence of certain differences in the digestion of raw and boiled milk. Remote effects of heating milk, with especial references to scurvy, rickets, intestinal flora, etc. Raw and boiled milk meet different therapeutic indications.

The Menace to the Young Child of the Common Infectious Cold.—T. S. Southworth, New York.—These colds are capable of doing much damage to infants and young children, causing among other things much otitis, pneumonia, sinus infection and interference with nutrition, both in hospital and private practice. A loose terminology is employed because of the practical difficulties of making a bacteriologic differentiation. Necessity for more general appreciation of the dangers by the laity. Discussion of common modes of infection and suggestions for their avoidance.

Nervous and Mental Diseases.

Clinicopathologic Study of Illuminating Gas Poisoning of the Central Nervous System.—J. W. McConnell and W. G. Spiller, Philadelphia.—A woman overcome by carbon monoxid apparently recovered in two days, but later developed mental peculiarities, stiffness of limbs and loss of control of the sphincters. Two weeks after the inhalation of gas, she was stuporous and generally spastic, and showed increase of reflexes. She died forty days after the accident, and at autopsy areas of softening in the lenticular nuclei were found and microscopic study of the brain resulted in some unusual findings. A discussion of the symptomatology of the subject of "relapsing gas poisoning"; of the etiology of the conditions found postmortem, with special reference to blood-pressure changes; to

the blood-vessel supply; to the effect of carbon monoxid on hemoblasts. New theory based on the neuropathologic study of the present case.

Heredity in Nervous Diseases and Its Social Bearings.—C. B. Davenport, Cold Spring Harbor, N. Y.—Recent studies in heredity make it probable that every disease, every peculiarity of form, structure and conduct, is determined in part by a hereditary factor. The nervous history of every child is thus, within limits, predetermined at the moment of conception. From this point of view the germ plasm carried by the parents becomes of increased importance. The family physician, after becoming cognizant of a contemplated marriage which must lead to nervously defective or weak offspring, should take steps to prevent its consummation. The rule of professional secrecy regarding matters of importance to progeny works against social progress and is in so far immoral. The physician should take an active part in race hygiene, or may be replaced in this capacity by the rise of a new profession.

Genito-Urinary Diseases.

Diagnosis and Indications for Operation in Early Hydronephrosis.—Hugh Cabot, Boston.—Too much attention paid to advanced cases. Most important work lies in detection of early cases and in separating them from other conditions which produce renal pain, and thus preventing important permanent damage to the kidney. The most important causes are: 1. Mobility of kidney with immobility of the upper portion of the ureter. 2. Abnormal renal vessels. Early cases present themselves in three types: 1. Those giving symptoms of stone in the kidney. 2. Those with symptoms of stone in the kidney, but without abnormality of the urine. 3. Those simulating acute infections of the kidney but showing sterile cultures. Diagnosis must rest on: 1. Demonstration of absence of other causes of the symptoms. 2. Proof of obstruction of the renal pelvis. Important diagnostic methods include: 1. Examination of the urine. 2. Examination with cystoscope and ureter catheter. 3. *X*-ray. 4. Pyelography in horizontal and vertical positions. Operation is indicated when: 1. Symptoms are present, and 2. Obstruction of the renal pelvis is demonstrated.

Nephritis and Hematuria.—H. A. Fowler, Washington, D. C.—Chronic interstitial nephritis is the most common underlying cause of profuse unilateral renal hemorrhage. The kidney lesion may be diffuse or circumscribed and detected only after the most careful and painstaking histologic examination of the entire kidney. Essential hematuria—bleeding from a healthy kidney—does not occur. Such cases reported in the literature will not stand against rigid analysis and investigation. The majority of such cases belong to the group of chronic interstitial nephritis. The diagnosis can be made clinically in the majority of cases.

Litholapaxy; Operation of Choice for Removal of Stone in Bladder.—A. T. Cabot, Boston.—Litholapaxy has proved to be the safest and most comfortable operation for stone removal, with the shortest convalescence. At present we have an anomalous and almost unaccountable condition of things, for, while the evidence of the best genito urinary surgeons is that litholapaxy is the operation of choice in uncomplicated cases of stone, it is the undoubted practice of most surgeons of the country to remove these stones suitable for litholapaxy by cutting operations: First, because many surgeons have not the apparatus to perform a litholapaxy and are unwilling to turn their patients over to a skilled lithotritist, and, second, because they imagine the operation to require such an excessive amount of skill that it is not worth their while to train themselves to it. The present position of the ordinary practicing surgeon toward litholapaxy is a strong argument in favor of the specialty of genito-urinary surgery.

Four Year's Experience with the Wassermann Reaction. Report of Cases Treated from the Standpoint of the Wassermann Reaction with Mercury Alone, with Salvarsan Alone, and by the Combined Method (Salvarsan and Mercury).—B. C. Corbus, Chicago.—Previous to the year 1907 there was no method of determining when a patient was cured of his syphilis. Biologic treatment begun at this time was only experimental, yet it offered a tangible guide in the treatment of this class of cases. The author's observations and early reports with mercury and iodid, patients having been under observation for four years. Later reports with salvarsan alone. Still later reports by the combined method (salvarsan and mercury). The Wassermann test based on false premises and as a consequence many members of the profession eager to discredit the management of syphilis after the biologic method. Time sufficiently long to draw definite conclusions. The merits of the Wassermann reaction are upheld by its absence in patients' serums that have been cured for periods of two to four years. The state of allergy, basis of the Noguchi reaction.

Hospitals.

Hospital Pathology: Asepsis and Cleanliness from the Clinician's Point of View.—John B. Murphy, Chicago.—The pathologist is destined to be one of the most important factors in the management and therapeusis of disease in the next decade. As the treatment of disease in that time is going to be largely of the vaccine and serotherapy type, the preparation of these autogenous vaccines will have to depend on the pathologist. Asepsis and surgical cleanliness in the hospital, from the clinician's standpoint, is also an important factor: First, asepsis is easily attained; second, asepsis is the result of conscientious cleanliness, and the spirit of the hospital must be in consonance with that sentiment. Another fact that has been overlooked is the superlative extravagance and expense of the clinicians, the medical staff and the house staff in the handling of cases in and out of the operating-room. This has been a great tax on the charity exchequer of the hospital management, and some adequate remedy to overcome the waste must be forthcoming.

The Efficiency of Out-Patient Work.—M. M. Davis, Jr., Boston.—Despite large sums spent in maintaining out-patient departments no systematic tests of efficiency have been applied to this type of work. Two methods for an impersonal efficiency test are suggested: 1. Test made on the basis of number of visits per patient classified according to diagnosis. 2. Test made by selecting a number of patients at random, and from the clinical records and by home visits, ascertaining the proportion of cases in which results of value or in which results of no value came about. Clinical organization should be improved, a system of follow-up work established, beginning at the admission desk, permeating the clinics, extending when necessary to the homes, and dealing with the social along with the medical conditions of patients. Meanwhile, efficiency tests need to be developed so that the value of this new work can be compared with its cost.

Relations of the Hospitals to Corporations Interested in Patients.—Samuel C. Plummer, Chicago.

Legal Aspects of the Relations of the Hospital to Corporations Interested in Patients.—M. L. Bell, Chicago.—These two papers cover one of the most vexing problems incident to the hospital administration, one covering the subject from the physicians' standpoint and the other from the standpoint of the law. It is of almost hourly occurrence, especially in the larger general hospitals, that patients are brought in who have been injured while at work in some large corporation or large business interest. These patients have their legal rights and the corporations, too, have their rights. The laws of the several states differ as to what these conflicting rights shall be. The labor unions, acting for labor, have fathered some aggressive legislation in recent years, and their views and the views of the administrative officers of the large corporations differ on many material points. On the whole the hospital administrator is extremely anxious to do the best he can for both the patient and the corporation interested financially in his welfare. What are the contending rights of these two interests? What is the proper attitude of the hospital in regard to these problems?

Relations of the Civil Hospital to the Military Establishment in Time of Peace; in Time of War.—Col. Charles Richard, U. S. A., Washington, D. C.—The ideal civil hospital. The land forces of the United States. The Regular Army. General duties of the medical department of the Army. Results achieved by the medical corps of the Army in the field of preventive medicine. Some made possible by reason of being carried out under military control. These results and other factors have brought the military service into closer relationship with the civil hospital. The organized militia. The volunteer Army. The sanitary service in time of war; its organization. The province of the Medical Reserve Corps in time of war. The military obligations of the medical profession in time of war. Relationship between the civil hospital and the military establishment is becoming closer; still closer affiliation will result in increased interest by the civilian in military affairs and prove mutually beneficial to both branches of the profession.

Many of the affiliated societies met in Atlantic City at the same time as the A. M. A.

The American Medical Editors Association's sessions were more largely attended than usual and the subjects presented for discussion were splendidly handled. These officers were elected: President, Dr. T. L. Stedman, of the *Medical Record;* first vice-president, Dr. E. A. Vanderveer, of Albany, *Annals;* second vice-president, Dr. George Strohbach, of Cincinnati.

Lancet-Clinic; secretary and treasurer, Dr. Joseph MacDonald, Jr., of the *American Journal of Surgery;* executive committee, Dr. O. F. Ball, of *Interstate Medical Journal;* Dr. W. A. Jones, of the *Journal of the Minnesota Medical Association,* and Dr. Finley Ellingwood, of *Ellingwood's Therapeutist.*

The editors' banquet was an unqualified success, under the inimitable toastmastership of Dr. Walter M. Brickner, editor of the *American Journal of Surgery.* He read letters from President Taft, Æsculapius and Mr. Roosevelt, which were so Bricknerian in flavor as to leave no doubt as to authorship, and these with his brilliant witticisms, kept the editors and their guests convulsed.

The speakers were President Jacobi, of the American Medical Association; Surgeon General Rupert Blue,, U. S. P. H. and M. H. S.; Dr. Henry O. Marcy, of Boston; Dr. George F. Butler, of Chicago; Dr. E. A. Ayers, of Branchville, N. J.; Dr. J. P. Warbasse, of Brooklyn; H. A. Sneddeker, Esq., of New York; Mr. Frederick L. Hoffman, of Newark, and Mr. W. B. Conyngham, of New York.

The Medical Editorial Table

MARRIAGE A LA SCIENCE.

Science, the modern Delphic oracle, cannot answer every question satisfactorily, and we should be cautious about construing the few sparse words that drop from her lips as the last utterance on certain subjects, unless we are over-enthusiastic worshippers at her shrine. Marriage founded on science, or guided rather by "a certificate of health from a reputable physician to the effect that they (the contracting parties) are normal, physically and mentally, and have neither an incurable nor a communicable disease," to use the words of the Rev. Walter T. Sumner, of the Protestant Episcopal Cathedral of Saints Peter and Paul, in Chicago, may add to that already distressing feature of American life—a further narrowing of one's personal liberty.

This is not to whitewash the deplorable effects of syphilis, or to belittle the disasters which follow in the wake of the gonococcus, but only to contend against the promulgation of ideas that can be easily misconstrued, even by "a reputable physician," into meaning that his whimsicalities, his crotchets, his vagaries, in case he is a perfect Lombrosoite or Eugenist, must be brought into play in framing a certificate of health. "The reputable physician" may be the most conscientious practitioner at the bedside, but he may be too conscientious when he is wrenched from his proper *milieu* and is called upon to exercise functions which do not properly belong to his domain. "The reputable physician's" honor cannot be impugned when he is dealing with the diseases which should act as an embargo against marriage, but the enthusiasm resulting from the responsibility thrust upon him in his new rôle may make his judgment untrustworthy. Medical men have been known before to be swept off their feet by theories which they afterward discarded as foolish; and if this is not only possible but highly probable as an oft-repeated occurrence inside the province of medicine, what are not the probabilities when they assume the part of judge in matters which, if explained from a medical standpoint plus diverse biases, would not only be incomprehensible to the laity, but so great an encroachment on the personal liberty of individuals that race suicide would not be the problem in swaddling clothes which it is to-day, but a giant of the strength of Hercules.—(*Interstate Medical Journal,* May, 1912.)

[Note.—If, as the writer says, the physician's honor cannot be impugned when he is dealing with the few diseases which should act as an embargo against marriage, why should he not decide these matters? Why should his enthusiasm vitiate his judgment in the consideration of questions to which he brings honor and skill? As a matter of fact the reputable physician would be no more enthusiastic about the decision of these matters than he is about the decision of any medical problems, to which he brings sober common sense. As to the question of limiting personal liberty we have to consider another very important personal matter in connection with another party—the child, whose right to be born right is second to no other personal consideration. The writer's points are too fine to be of any practical value and his spectres are too thin to be visible to his colleagues. He reasons like one living in a society which had never known any doctors. Physicians being proposed, one can easily imagine the theoretical objections that could be brought against them by such a critic, who would consider a body of professional men enjoying the measure of trust reposed in our colleagues of to-day as preposterous and inconceivable. Their "whimsicalities, crotchets and vagaries" would effectually hinder their usefulness (not to mention their "enthusiasm") and make them a menace to "personal liberty."]

THE FUTURE OF HOSPITAL SOCIAL SERVICE.

Aside from the problems of sex diseases the success of social service has been marked, and the help which it has rendered to physicians as well as to patients is unquestioned. Its problem is essentially still the old one of trying somehow to teach the other half of the world how to live.

What will be the future of the hospital social service movement probably no one can now surely predict. That it will always have a legitimate place in the work of a hospital there seems little doubt. As time goes by, however, it seems clear that social service, at least as at present organized, does not solve the whole problem. Its acknowledged failure in the case of venereal diseases is an instance in point. The realization that social service is not a panacea is a very hopeful sign. Perhaps in time its most important functions will "be absorbed in the larger medical sociology." This sounds like a "consummation devoutly to be wished." Meantime, however, the "larger medical sociology" is still in a somewhat inchoative and nebulous condition; and until it has further emerged and shaped itself out of the chaotic mists of its genesis, the social service must remain one of the valuably helpful, even though imperfect, agents of hospital activity.—(*Boston Medical and Surgical Journal,* May 9, 1912.)

[Note.—Social service work should not be engaged in as an end in itself. It should be regarded as an expedient, bound ultimately to pass away, along with those things which have called it into temporary being, unless we are hopeless of our social future. While accomplishing a large measure of good, social service does not strike at fundamental conditions, concerning itself too much with end-results. We are too timid to quickly attain fundamental social necessities and fritter away our energies in small parcels upon immediate, isolated, secondary problems. Palliation is the order of the day and there is an unwillingness to concede the feasibility or to admit the soundness of any radical social programs. That progress can be made only through a slow evolutionary process is axiomatically insisted upon, and those who believe otherwise are dangerous agitators. Positive ingenuity is displayed in side-stepping anything approaching social surgery and our Chinese doctors, sociologically speaking, are able to prove conclusively that the knife has nothing on pill and potion treatment in the presence of economic gangrene. It is impossible to confound these clever dialecticians, who are the moulders of society's thought. The key to their character we conceive to be a curious egotism, connoting a priggish and stilted individualism. They really know what the solutions of our social problems are, and they would be willing enough to see the condition of others change, but they are taking absolutely no chances themselves. In a state of society different from that in which they live they fear that they might be less comfortable and less fortunately placed. What social service will ever prevail

upon them to cast aside their reservations and fulfil what should really be the functions of those who are charged with the study and solutions of our big problems?]

House-Flies and Bacteria.

The house-fly stands accused as a disseminator of typhoid fever, cholera, dysentery, diphtheria, erysipelas, contagious ophthalmia, cerebrospinal meningitis, anthrax and small-pox, but it has not been convicted in every case. There is a certain amount of hysteria involved in the prevailing attitude toward the house-fly. In the case of the infections of fecal origin, particularly typhoid, the evidence appears to be quite complete. But there is danger of distracting attention from much more important factors by blindly encouraging a hyperenthusiasm for a single sanitary propaganda and fixing our hygienic viewpoint at a single center. The *relative* importance of the house-fly as a typhoid-spreader, compared with the other well-known methods of transfer has been by no means clearly established. Unwarranted faith in the iniquity of flies may lead to the neglect of the far more serious danger of contact infection. There is no evidence, according to Torrey, of the Loomis Laboratory in New York City, that in the average city the house-fly is a factor of great moment in the dissemination of disease. Of course in camps and in filthy communities without sewerage flies may be important factors in the spread of diseases, at any rate of the fecal-borne class.

While we should not lay overemphasis on fly transmission of disease we must regard the house-fly as an undesirable citizen in any event, and the war of extermination already begun against it in many quarters deserves encouragement and support. In the meantime there is a demand for more facts showing the actual degree of the fly menace.—(*J. A. M. A.*, May 11, 1912.)

Recent Views of Diet for Diabetics.

The present age is one of revolution in regard to the dietetics of diabetes. Many carbohydrate plans are recommended. There is an oatmeal diet, a potato diet, flour diets and vegetable diets, and at the present rate we should soon be having a sugar diet. Meat and alcohol are forbidden by many. Rolly says that flesh albumins apparently increase glycosuria while vegetable albumins seem to diminish it. Bornstein claims that with each increase in sugar production the nervous system suffers. The diabetic, he says, is a neurasthenic, hence cannot tolerate alcohol even in small quantities. It stupefies the body cells, or slows metabolism, implying that it is not oxidized. Von Strümpell depreciates the tendency to measure the patient's actual condition by the amount of sugar excreted. While it is true that when this reaches a certain height furuncles begin to appear, and that we can determine a tolerance point to carbohydrate feeling, yet he has known patients to eliminate two or three per cent. of sugar for ten years and yet be in relatively good health. To treat the patient by diet only is not to treat at all. We must treat the patient, not his glycosuria. Air, light, water, electric baths, incandescent light baths and massage must be resorted to to keep up strength and efficiency. Mild cases bear protein well, severe ones ill. Mild cases benefit by moderate exercise, severe cases do not. Rolly does not think the withdrawal of alcohol necessary, thus differing from Bornstein.—(*Medical Record*, May 11, 1912.)

When preparing the radial artery for transfusion it is very important to gently dissect out and tie with very fine ligatures the branches of the vessel in the field. If any of these is torn or bruised, a clot will form in it which, by extending into the radial, will interfere with or prevent the flow of blood.—(*Am. Jour. Surg.*)

The synovial membrane and the bone are the only seats of primary infection around a joint, the cartilage and fibrous capsule never.

Diet, Hygiene and Nursing

BACTERIOLOGY.*

WILLIAM HENRY BOESE, M. D.,
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PART III.

(*Continued from p. 153, May.*)

Methods of Disinfection in Infectious and Contagious Diseases.

The following paragraphs I take literally from Park's book on bacteriology, as the statements are concise and detailed, and most essential.

"The diseases to be commonly guarded against, outside of surgery, by disinfection are scarlet fever, measles, diphtheria, tuberculosis, smallpox, typhoid and typhus fever, bubonic plague and cholera. The solutions referred to in this paragraph are 5% carbolic and 1-1000 bichloride solution. The milk of lime is made by adding one qt. of dry freshly slaked lime to four or five qts. of water.

1. Hands and person: Dilute the carbolic solution with an equal amount of water or use the bichloride solution without dilution. Hands soiled in caring for persons suffering from contagious diseases, or soiled portions of the patient's body, should be immediately and thoroughly washed with one of these solutions and then washed with soap and water, and finally immersed again in the solutions. The nails should always be kept perfectly clean. Before eating, the hands should be first washed in one of the above solutions, and then thoroughly scrubbed with soap and water by means of a brush.

2. Soiled clothing, towels, napkins, bedding, etc., should be immediately immersed in the carbolic solution, in the sick room, and soaked for one or more hours. They should then be wrung out and boiled in the soapsuds solution for one hour. Articles such as beds, woolen clothing, etc., which cannot be washed, should at the end of the disease be referred to the Health Department, if such is within reach, for disinfection or destruction; or if there is no public disinfection, these goods should be thoroughly exposed to formaldehyde gas, as noted later.

3. Food and Drink.—Food thoroughly cooked and drinks that have been boiled are free from disease germs. Food and drinks, after cooking and boiling, if not immediately used, should be placed when cool in clean dishes or vessels and covered. In the presence of an epidemic of cholera or typhoid fever, milk and water used for drinking, cooking, washing dishes, etc., should be boiled before using, and all persons should avoid eating uncooked fruit and fresh vegetables. Instead of boiling, milk may be heated to 80° C. (176° F.) for one-half hour.

4. Discharges of all kinds from the mouth, nose, bladder and bowels of patients suffering from contagious diseases should be received into glass or earthen vessels containing the carbolic solution, or milk of lime, or they should be removed on pieces of cloth, which are immediately immersed in one of these solutions. Special care should be observed to disinfect at once the vomited matter and the intestinal discharges, and in diphtheria, measles, and scarlet fever the discharges from the throat and nose all carry infection and should be treated in the same manner. The volume of the solution used to disinfect discharges should be at least twice as great as that of the discharge, and should completely mix with and cover it. After standing for an hour or more the disinfecting solutions with the discharges may be thrown into the water closet. Cloths, towels, napkins, bedding, or clothing soiled by the discharges must be at once placed in the carbolic solution and the hands of the attendants disinfected, as described above.

*Lecture delivered before the nurses of Lebanon Hospital.

In convalescence from measles and scarlet fever the scales from the skin are also carriers of infection. To prevent the dissemination of disease by means of these scales the skin should be carefully washed daily in warm soap and water. After use the soap suds should be disinfected and thrown into the water closet.

Masses of feces are extremely difficult to disinfect except on the surface, for it takes disinfectants such as the carbolic acid solution some twelve hours to penetrate their interior. If fecal masses are to be thrown into places where the disinfectant solution covering them will be washed off, it will be necessary to be certain that the disinfectant has previously penetrated to all portions and destroyed the disease germs. This can be brought about by stirring them with the disinfectant and allowing the mixture to stand for an hour, or by washing them into a pot holding soda solution which is already at the boiling temperature, or later will be brought to one.

5. Sputum from consumptive patients.—The importance of the proper disinfection of the sputum from consumptive patients is still under-estimated. Consumption is an infectious disease, and is always the result of transmission from the sick to the healthy or from animals to man. The sputum contains the germs which cause the disease, and in a large proportion of cases is the source of infection. After being discharged, unless properly disposed of, it may become dry and pulverized and float in the air as dust. This dust contains the germs, and is a common cause of the disease, through inhalation. In all cases, therefore, the sputum should be disinfected when discharged. It should be received in covered cups containing the carbolic or milk of lime solution. Handkerchiefs soiled by it should be soaked in the carbolic solution and then boiled. Dust from the walls, mouldings, pictures, etc., in rooms that have been occupied by consumptive patients, where the rules of cleanliness have not been carried out, contain the germs and will produce tuberculosis in animals when used for their inoculation; therefore, rooms should be thoroughly disinfected before they are again occupied. If the sputum of all consumptive patients were destroyed at once when discharged a large proportion of the cases would be prevented.

A Prophylactic Dental Assistant.

A field which many nurses are entering is that of prophylactic assistants to dental surgeons.

The hours required are fewer than those of the general nurse, and the work is interesting and remunerative.

A writer in the *Dental Cosmos* says that to secure an assistant of this sort he first teaches her the anatomy of the mouth and the teeth. She is then taught to remove ink from teeth which have been smeared for the purpose. After this the dentist cleans the pupil's teeth with stick and pumice and she watches him work with the assistance of a hand mirror. Then she is allowed to clean the dentist's teeth and he instructs her as she operates. At the end of a month she is permitted to clean the teeth of children. She is finally taught the uses of different instruments and gradually becomes a full fledged assistant.

In training a nurse for this work he says: "I would pursue a similar course. I think there would be some advantage in having a trained medical nurse. Her course of lectures and training at the hospital would be of advantage to her, and the confidence of the public in the work and service of these women is already established. I believe there would be no difficulty in securing trained nurses at a reasonable price, to start with, to do this prophylactic work. Trained nurses receive on an average twenty-five dollars a week; but their time is not always engaged, so that, in the course of a year, they might not average over fifteen dollars a week. The hours of a dental practice would be more attractive to most of these women than the continuous hours of nursing, and in my opinion it would not be difficult to secure their services for this prophylactic work."

Undoubtedly this work will prove attractive to many nurses who cannot stand the hard work of general nursing.

ORAL HYGIENE.

The mouth is the gateway to the body and unless its portals be guarded carefully, bacterial enemies will enter and attack the entire system. The importance of oral hygiene is felt alike by the physician and the dentist, though we must confess with chagrin that the dental surgeon is giving the subject the more intelligent attention. His main object is to maintain a healthful condition of the mouth and teeth, while the physician seeks to prevent the ingress of harmful bacilli into the gastro-intestinal tract.

In considering the hygiene of the mouth from the dental standpoint we realize that mere teeth brushing is insufficient. To it must be added the use of the floss and an antiseptic mouth wash, which Roese says, should be non-caustic, non-decalcifying and non-poisonous, with sufficient antiseptic action and good taste and odor.

Dr. Herman Prinz, of Washington University, St. Louis, the leader of scientific dentists in this country, advocates the following as a tooth wash (*Interstate Med. Jour.*):

Resorcinol	ʒi.
Zinc chloride	gr. x.
Menthol	gr. xx.
Thymol	gr. xv.
Oil of Wintergreen, synthetic	♏ xv.
Alcohol	ʒii.
Solution hydrogen dioxide	ʒiii.
Water, q. s.	ʒviii.

A teaspoonful in ½ tumblerful of warm water as a mouth-wash.

In conjunction with the wash, a suitable tooth powder should be employed. The following offers a suitable example of such a compound:

Precipitated calcium carbonate	ʒii.
Powdered castile soap	ʒi.
Oil of peppermint	♏ xx.

Prinz further says that in the preparation of a mouth wash these drugs must not be used:

Alum, charcoal, formaldehyde solution, iron salts, mineral acids (with the exception of boric acid), mercury salts, salicylic acid and salol, beet and cane sugars, and easily fermentable substances.

If the mouth is properly cared for from a dental standpoint we have every reason to believe that pathogenic bacilli will be denied entrance to the body via the oral cavity and be it remembered 75 per cent. of the disease-causing bacteria get into the system through the gastro-intestinal tract.

Nodine, of New York (*Oral Hygiene*, May, 1912), takes life insurance companies to task for their carelessness in not insisting upon a more thorough oral examination. He believes primary tuberculosis of the mouth is more common than generally acknowledged and that on account of the difficulty of diagnosis it is not recognized in time and promptly proves fatal. A careful examination of the mouth would, he thinks, remedy this deficiency. Again, Nodine says three additional factors are flagrantly disregarded by medical insurance examiners. First, decayed teeth and septic mouths are inciters of and commonly associated with mouth breathing. Jonathan Wright has proved that it is possible for five times as many micro-organisms to gain access to the lungs and bronchial passages through the mouth as through the nose. Second, it is now very generally conceded, that systemic infection with tubercle bacilli takes place through the mouth and gastro-intestinal tract in fully 75 per cent. of the cases. Third, decayed teeth and septic mouths are insidious underminers of the natural resistance of the human organism by impairing the digestion and by the gradual production of a general toxemia. This derangement of the digestive process and induction of the toxemia is accomplished by the constant ingestion and absorption of the microörganisms that propagate so rapidly and so freely in the mouth and carious teeth.

On the integrity of the digestive system in tuberculosis generally depends the result of the conflict. On it more than any

other part of the body, depends the outlook of the patient for recovery, for unless a proper amount of nourishment properly prepared by it, is given to the cells, they will fail in their battle with the disease.

He recommends watchful examination of the mouth and teeth of all tuberculars, as caries will cause severe indigestion and eventually doom the patient.

Nodine also calls attention to the necessity of guarding the mouth against the invasion of the pneumococcus and similar microörganisms, particularly as septic pneumonia is a frequent sequel to operations on the mouth, jaw and pharnyx, and often follows the extraction of necrotic roots with suppurating tooth sockets.

He concludes that—Pneumonia has a greater mortality than tuberculosis. Pneumococci are almost constant inhabitants of a septic mouth, carious teeth, infected tonsils and infected pulps. Septic pneumonia is due to the inhalation of septic material from the mouth, and it is the most frequent complication and sequel in measles, scarlet fever, small-pox, typhoid, diphtheria and erysipelas, due either to the ingestion or the inhalation of microörganisms from a septic mouth. Five times as many microörganisms may reach the lungs through the mouth as through the nose. Mouth breathing is most commonly caused by decayed and disarranged teeth and contracted dental arches.

Nodine has done a real service in calling attention to the serious consequences of decayed teeth and it is to be hoped he will later take up the connection of the septic mouth with disturbances of the gastro-intestinal tract.

That the dentists are alive to the exigencies of the situation is made manifest by the organization of dental surgeons of the National Mouth Hygiene Association, which has been founded for the express purpose of advocating oral cleanliness.

In writing on this subject Dr. Zarbaugh, of Cleveland, says (*Dental Digest*, May, 1912): "The Oral Hygiene movement offers an opportunity for the dental profession to render a never-to-be-forgotten service to humanity, promoting the welfare of the human family, such as will stand out for all time, a bright spot in the history of dental science."

This organization has purchased fifteen educational motion picture films and this year they are being shown in fifteen different states, under the direction of committees from the State dental societies. It is planned to have the pictures exhibited in every theatre in the city in which they are being shown.

The moving picture series opens with a home scene, showing a family group. The father, in the evening paper, reads an article published by the National Mouth Hygiene Association: "The time to begin to care for teeth is in childhood," etc. Father calls mother's attention to the article, which is then shown on the screen. They then look at the children's teeth and decide then and there to instruct the children in the care of their teeth. The next view shows a dental nurse or dentist instructing the children in the proper manner of caring for the teeth, the use of dental floss, the folly of blunt wood toothpicks, etc., the correct method of brushing the teeth, etc.

Then follow a near view of an unhealthy mouth, loose teeth, tartar, pus; the process of decay in a tooth is shown in detail, explaining why decayed teeth ache. Another picture shows the growth of bacteria in a badly decayed molar in twenty-four hours. The multiplication of germs is shown in motion and teaches such a lesson that anyone seeing it, who has a decayed tooth, will not go to bed without making some effort to clean it up. When we consider the appalling rapidity with which bacteria multiply we can realize how interesting this picture is sure to be. According to Conn, professor of biology at Wesleyan University, "it is the power of multiplication by division that makes bacteria so significant. This power of growth is almost incredible. Some species divide every thirty minutes, or even less. At this rate each bacterium would produce, in a single day more than 16,500,000 descendants; in two days about 281,500,000,000, or about one solid pint. At the end of the third day, unless checked, the product of one original bacterium would weigh about 16,000,000 pounds. Of course, this growth is only theoretical, as under no conceivable bodily condition could it go on unchecked."

The motion picture is only one of the many methods to be employed by the National Mouth Hygiene Association for bringing the public to a realization and knowledge of what they can do for themselves in the way of caring for and preventing mouth and tooth trouble.

While the pictures are being run in a city, newspaper articles are printed of an educational nature, calling the attention of the public to the subject.

Dental surgeons are doing a great constructive work for humanity. Why cannot the medical profession add the weight of its influence and active assistance to so helpful an undertaking?

THE PUBLIC AND THE PROFESSION.

Dr. Algernon T. Bristow, of Brooklyn, New York, contributes to the March number of the *New York State Journal of Medicine* a thought-inspiring paper on "The Public and the Medical Profession." In it he reviews the many disabilities under which the profession is to-day laboring, but the kernel of the paper has to do with the vexed question of fee-splitting. We are engaged in a fierce and destructive, a demoralizing, competition, and the poor doctor and the ambitious surgeon are confronted by a situation that is full of temptation. Is there any remedy? There is no question that as a profession we are in deep water. In dealing with the economic problems which confront us we cannot leave out of sight the economic problems of our patients. The plight of the profession is related to the plight of the people as a whole. There is food for thought in the statistics of Scott Nearing, who has found that 90 per cent. of adult males earn less than $800 a year, 75 per cent. less than $600, and fully 50 per cent. less than $500, and 20 per cent. as low as $200 annually. Chapin estimates that $900 per annum is the sum necessary in New York for a man, wife and three children to maintain what he calls a normal standard of living. This estimate seems too low. The industrial exploitation of the people is as much a matter of concern to the medical profession as it is to the workers themselves. Matters like fee-splitting are only a reflex of the generally bad economic conditions prevailing in the country. The profession is reduced to ignoble expedients because of the low moral standards that follow in the wake of the general economic degradation.

Bristow proposes that the county societies recognize the inequalities which obtain where the surgeon receives a fee equal perhaps to 7 per cent. of the entire annual income of the physician who surrenders a case to him, the physician receiving a mere pittance for his services and ceasing to receive further remuneration during the patient's illness. The substantial injustice to the physician ought to be formally recognized. Then the county society, in consideration of all the facts, should say that it shall be allowable and proper for the physician and surgeon to render a joint bill to the patient, in which the family practitioner shall be recognized as he never has been heretofore except on the sly and by a secret agreement, in itself always a bad thing. What compensation shall go to the physician and what to the surgeon Bristow does not attempt to determine, but leaves this phase of the matter to the societies. His idea seems to be that the physician deserves some special remuneration for diagnosis and for the assumption of responsibility in recommending operation in conjunction with the surgeon. He does not insist that this solution is the right one, but it is the best he can offer in all sincerity and good faith after much thought.

There is probably no single remedy, he says, for the social and economic conditions which are crowding us to the wall, but the recognition of these conditions is a prerequisite to the application of any remedy, and the most encouraging sign of the times which has appeared is the fact that medical societies all over the State are recognizing the unfavorable conditions which surround us and which are responsible for the evil ways into which we have fallen. Bristow recognizes that it is quite possible for the course that he proposes to result in surgeons bidding against each other for the jobs, but that is what is actually done in secret to-day and it seems to him better and fairer for the profession to come out openly and acknowledge that an injustice has been done the family practitioner in the past and try to find an honorable method of remedying the injustice than to continue the present secret methods. He has faith in the sense of justice of the family practitioner and does not believe that if the course suggested were adopted the doctors would try to drive the specialists to the wall. There are as fair-minded men in medicine as in any of the learned professions and in the long run right would prevail, and the trickster and the man who was willing to practice unfairly and secretly to the detriment of his neighbor would find themselves shortly in disrepute.

THE ANTI-FLY CRUSADE.

War has been declared upon the fly. From Maine to California and from Canada to the Gulf physicians and sanitarians have instituted a crusade against the housefly, which, if persisted in, will mean the elimination of this dangerous disease-carrier.

Although this insect has long been recognized as a menace, it is only within a few years that systematic efforts have been made towards its eradication.

It is often responsible for the spread of typhoid fever and experience shows that tuberculosis and poliomyelitis are among the diseases that are transmissible by the aid of the fly.

It is gratifying to note the interest the public press is taking in the anti-fly crusade. The New York *Times* recently devoted a page to the subject and metropolitan dailies and country weeklies are vieing with each other in presenting to their readers the vital necessity of killing the pests.

One of the large magazines in an editorial on "The House-Fly as a Carrier of Disease," said:

Dr. Leland O. Howard, chief entomologist of the Department of Agriculture, and boss fly expert of this country, says that a common house-fly which comes out of hibernation on April 15th, and gets busy as poultry-raisers desire their hens to get—doing a standard day's work every day, that is—will have one hundred and twenty adult descendants by April 30th. These in turn, getting down to business in like fashion, will start a geometrical progression which by September 10th will have produced, as descendants of that first Mother Eve of flydom, more than five thousand billions—a number containing thirteen figures when written down—of the buzzing messengers of disease!

All summer long this swarming host will be diligently distributing the germs of all manner of diseases. If all the mother flies could be suppressed, and their potentiality of progeny destroyed, the death-rate, the doctors' incomes, and the undertakers' profits would simultaneously decline.

And to a marvelous extent they can be suppressed, too. Dr. Howard tells how, in "Farmer's Bulletin No. 459." A postal card addressed to the Department of Agriculture, Washington, will bring the bulletin by return mail. The department is only too glad to get copies printed as fast as they are requested.

Why not get a copy, and by following instructions increase your own and your neighbor's expectation of life, and also the comfort of living while it lasts?

Bulletin No. 459 has been scattered broadcast and is doing much good. Many state boards of health are pushing the matter vigorously. Pennsylvania, Michigan, Ohio, North Dakota, Virginia, Iowa, Massachusetts, Texas, South Carolina, Illinois, Indiana, New York, Kansas, Tennessee, Missouri and Wisconsin are among the states that are fully alive to the situation.

Individual cities are enlisting the services of their citizens, particularly the young, in combating the evil. Last year Washington offered prizes to those children under 16 who brought in the greatest number and millions of flies were secured.

Worcester, Mass., destroyed 40 bushels and a 12-year-old boy earned a prize of $100 for delivering 95 quarts of flies to the authorities.

New York City has been most active in the killing of flies, although for obvious reasons it has offered no prizes. In Boston the Woman's Municipal League is showing the danger that is caused by flies by means of steropticon pictures. The Boy Scouts, District Nursing Associations and other Boston organizations have declared relentless warfare against the insect.

Edward Hatch, Jr., a New York philanthropist, and chairman of the American Civic Association's Fly Fighting Committee, alarmed at the disease-carrying propensities of flies, has had a moving picture film constructed showing the various activities of flies. The film, shown all over the country, is believed to have done more than any other one thing to bring millions of people to realize how great is the danger from flies, and how necessary to remove it. Mr. Hatch has also printed and sent out free of charge several hundred thousand bulletins explaining what should be done and how to do it.

The civic committee of one of Louisville's women's clubs, taking this cue, started in last spring to rid the city of flies. They enlisted the assistance of the newspapers and gave wide publicity to the pernicious activity of the fly. The health officer gave stereopticon lectures on the "Life and Habits of the Fly." The city chemist spoke at the schools and enlisted the interest of the children. A moving picture in one of the large theatres set forth vividly the filthy places where flies congregate. The women co-operated with Mr. Hatch, who said that cleanliness is the beginning of the end of the house-fly, and as a result Louisville was freer from the pests last year than ever before.

That children are effective agents in the warfare against the insects has been often proved. A unique method of interesting children in this work has been evolved by Jean Dawson, of the Cleveland Normal School, who has prepared a little book of questions and answers on the fly subject.

After explaining, in this way, why flies are dangerous, how they spread disease, where they spend the winter and what they do in spring, the book tells about their breeding, their food, and how they carry dirt as well as disease. Here are some of the questions:

Q. Can a family escape the dangers from flies by screening them out of the house?

A. No, not if they use food over which flies have swarmed or fallen into.

Q. Do flies carry sickness and death to many people in the United States?

A. There are nearly five hundred thousand cases of typhoid fever yearly in the United States, and nearly 50,000 deaths. Much of this is distributed by flies. Forty-nine thousand infants die annually of enteritis or summer complaint, the germs of which are probably all carried to the milk by flies. Flies are now known to be the most deadly enemy of man. They kill more people than all the lions, tigers, snakes, and even wars.

Q. How is it possible to protect ourselves more from flies than we already have?

A. We must come out and fight them in the open.

Q. How can this be done?

A. In three ways:

(a) By killing all the winter flies that have been hiding in buildings as fast as they come out.

(b) By cleaning up all manure and filth in which flies may breed.

(c) By keeping traps set in covers of garbage cans and on porches where the flies are thickest to catch them before they can enter our homes.

Q. If we did clean up all the manure and filth from the neighborhood would not flies swarm in from other parts?

A. A fly seldom travels over 500 yards from its breeding place.

Q. With what are the traps baited?

A. If used in the cover of a garbage can the garbage is the bait. If used otherwise, bread and milk is an attractive bait.

To further impress the dangers of the typhoid fly upon children, Mr. Hatch devised a series of essays upon the subject and offered two sets of prizes in each of a number of cities. In the aggregate he spent in this way some $700, many thousands competing. One result is that an army of children have acquainted themselves with the fly and what it does to man. Second, the fact that a New Yorker was offering his own money in this campaign, succeeded in arousing the spirit manifested among children all over the country, and caused local newspapers, health bodies, educational institutions, and other individuals in many places to go into the matter on their own responsibility. In addition some of the more enterprising cities, like Cleveland, paid 10 cents a hundred for all the winter flies captured or killed by school children before these insect mothers laid eggs for hatching in the early spring. A strict time limit was set so as to avoid any attempts to raise flies.

For use in shops, stables, restaurants and other places where flies congregate in large numbers, Dr. C. E. Terry, writing in the *American Journal of Public Health*, advocates fly traps which he describes as "made of wire cloth in the shape of a cylinder, upon a metal frame with a cone inside arising from the bottom. They may be obtained from several different manufacturers at a small figure, and when baited with syrup or other suitable material perform most excellent execution. In three days at a back door of a downtown restaurant we captured 9,000 flies, while inside a fish market in a similar period we captured over 10,000. A second exposure of the trap behind the same restaurant resulted in the capture of comparatively few, presumably owing to the local nature of the pest."

The campaign against the fly will continue unabated this summer, many local and state boards of health having taken up the matter officially.

The house-fly is a disseminator of disease, as well as an annoyance.

Early last month the New York State Department of Health sent out a strong circular urging health officers throughout the state to conduct a vigorous anti-fly crusade at this time, pointing out "that the same expenditure of effort at the beginning of the fly season will accomplish much more than it can in the height of the summer."

"The weather has been cold and wet," says the department, "and the consequent backwardness of the fly crop tells in favor of the campaign of the 'fly swatters.'

"Why not cultivate a public sentiment against untidiness about the premises and in the streets, supplementing the teaching by the making and enforcing of ordinances for the benefit of those who need a little stronger form of persuasion?

"The summer months are always marked by many deaths among infants, and for many of these, flies are directly responsible by poisoning the milk fed to the baby. A mother who loves her child should as soon think of giving it poison as milk in which a fly has alighted, unless the milk is brought to a boiling point after the fly has been removed."

City boards of health are issuing some snappy bulletins of which the following healthgrams from the *Bulletin* of the Chicago Department of Health is a good example:

A city is as clean as its people.
Civic uncleanliness kills civic pride.
The three (dis)graces—filth, flies, and fever.
'Tis well to look to the well if you would keep well.
One swat in the spring will save you a million swats in the summer.
Typhoid to prevent costs a few cents, to cure costs many dollars.
If the weather is hot, shun the cocktail and do not reach for the highball.
Don't buy any food from a dirty place. If the flies "beat you to it" let them have it.
'Tis a wise community which places community health above all other community possessions.
Typhoid is most prevalent in the late summer and early fall days—so are flies. Get the connection?
"Fruit a la filth"—the kind served from sidewalk stands after exposure to street dirt and flies.
The typhoid chain of F's:
Filth.. Food.....Fever.
Flies
Fingers.....

The fly encountered in the woods is more of a pest and less dangerous. For those of our readers who go to the woods and suffer from the bites of flies and other insects we give the formula of a "fly-dope" which *Field and Stream* says is most potent:

Pinetar ..... 3 drs.
Olive (or castor) oil..... 2 ozs.
Oil pennyroyal,
Citronella,
Creosote,
Camphor (pulverized),
.....of each, 1 oz.
Large tube carbolated vaseline.

Heat the tar and oil and add the other ingredients; simmer over slow fire until well mixed. The tar may be omitted if disliked, or for ladies' use. A sufficient quantity for a day's use can be carried in a small oil-can with a hollow tip.

Judd believes that most ventral hernias occur in fat people and advises treatment of from two to six weeks for reduction of flesh. He recommends an effective laxative once a day and the elimination of all carbo-hydrates and fat from the diet. He says he has often been able to reduce these patients 25 pounds within four weeks. During this time he advises the patient to spend several hours each day in reducing or attempting to reduce the hernia, thus avoiding the sudden increase in intra-abdominal pressure by the reduction at the time of the operation.

An amebic colitis that has been quiescent frequently lights up after a complicating liver abscess has been drained. Such patients may recover from the abscess and succumb to the colitis, (n all cases of amebic liver abscess, therefore, treat the bowel also, by appendicostomy and irrigation, even though it is giving no symptoms.—(*Am. Jour. Surg.*)

The Care of the Insane and Hospital Management. By Charles W. Page, M. D., late Superintendent of Danvers State Hospital. 155 pages. Cloth. Boston: W. M. Leonard, 1912.

Thirty-five years' experience as a physician to the insane has taught the author the value of carrying out to a greater degree than is usually practised the system of "non-restraint," so successfully exemplified by Conolly, of England. This thought is the keynote of the book, which is really a most instructive compendium and of decided value to physicians who contemplate taking up institutional work among those mentally afflicted. Dr. Page is one of New England's best known alienists, and the only criticism we can make of his book is that it is too brief. His wide experience as a medical superintendent and his charm of authorial style, warrant a comprehensive work on the management of the insane.

Clinical Chemistry, Microscopy and Bacteriology. By Drs. M. Klopstock and A. Kowarsky, of Berlin. 400 pages. Illustrated. Cloth. $3 net. New York: Rebman Company, 1912.

This book is of equal value to the laboratorian and the practitioner, containing as it does a vast amount of practical working knowledge, presented in clear and lucent style. It is quite up to date, and its description of the technic of obtaining the Wassermann reaction is one of the best we have seen.

The Physician's Library

Spondylotherapy. By Albert Abrams, M. D., consulting physician to Mount Zion and French Hospitals, San Francisco. 3d edition. Cloth. 672 pages. San Francisco; The Philopolis Press, Lincoln Bldg., 1912.

That which is new in medicine often has to run the gamut of ridicule and professional abuse, despite its value. When Abrams first presented his views on clinical physiology and the relation of the spine to disease, he was called an osteopath and a chiropractor and was accused of trying to exploit some of his percussion instruments. Expecting such denunciation, he steadily made his way, and his book has been received with increasing favor.

Most thinking physicians agree to a considerable extent with Abrams' conclusions. Many men would not acknowledge themselves as his followers, but they do get results when they practise "spinal therapeutics." It is becoming more and more evident that the spine is the seat of the causative agents of many human difficulties. These practitioners who believe this or who are willing to study the matter should read Abrams' book. It is a masterly production, from which even the unbeliever can obtain good.

The Surgical Clinics of John B. Murphy, M. D., at Mercy Hospital, Chicago, Volume I, Number II. Octavo of 291 pages, illustrated. Published bi-monthly. Price per year: Paper, $8.00; Cloth, $12.00. Philadelphia and London: W. B. Saunders Company, 1912.

This number is a surgical treasure house. It is hard to differentiate in this wealth of good things, but we found especially enlightening the talks on Ununited Fracture of the Tibia, Charcot's Ankle Joint, Gastric Ulcer, Ankylosis of the Knee, Ankylosis of the Hip and Cyst in the Left Iliac Fossa.

Among the delights to every one who has heard Murphy lecture as he operates are his snappy, terse sentences teeming with Americanisms. This feature predominates in this series, showing that the editorial blue pencil is missing.

The Physiology of the Semi-circular Canals and their Relation to Seasickness. By Joseph Byrne, M. D., LL. B. 569 pages. Cloth. New York. J. T. Dougherty, 1912.

This somewhat exhaustive treatise on a rather unusual subject goes into the etiology of mal de mer thoroughly and finds that its effects upon the organism and upon the mechanisms of the circulation and digestion are analogous to the sickness following rotation and aural irrigations and that caused by the use of galvanism over the mastoid areas. He finds that, contrary to usual belief, disturbances of the circulation and digestive disturbances are not the primary causes of seasickness. Experiments lead him to the determination that the true cause of distressing mal de mer can be found in the semicircular canals. Digestive and circulatory troubles are made decidedly secondary causative agents. The work is very interesting and shows an unusual amount of careful observation. Persons given to seasickness will find in this book much valuable information.

International Clinics. A quarterly edited by Henry W. Cattell, M. D., of Philadelphia. 22d series, Vol. I. 300 pages. Illustrated. Cloth. $2 net. Philadelphia: J. B. Lippincott Co., 1912.

This volume lacks nothing in the excellence which has characterized the series for more than a score of years. It has become a widely recognized authority upon topics pertaining to the different branches of medicine. In this book diagnosis, medicine, surgery, obstetrics, otology and eugenics are treated, while a feature of more than passing interest to all physicians is a history of the College of Physicians of Philadelphia by its president, the highly gifted de Schweinitz. The progress of medicine in 1911 is a brief but careful resume of medical advance for that year, and calls attention to everything worthy of record. An article of especial value just now is that on Eugenics by Solomon of Washington. It treats this important subject very thoroughly. The Treatment of Facial Paralysis, by Cyriax; Sanitarium Treatment of Tuberculosis in Private Practice, by Mudgett; and Important Factors in Reducing High Death Rate in Diphtheria are worthy of more than a hasty glance.

Books Received.

Diagnostic Methods, Chemical, Bacteriological and Microscopical. By Ralph W. Webster, M. D., of Rush Medical College, University of Chicago. 2d edition. 682 pages. Cloth. Illustrated. $4.50 net. Published in 1912 by P. Blakiston's Son & Co., Philadelphia.

Surgical After Treatment. By L. R. G. Crandon, M. D., of Harvard Medical School, and Albert Ehrenfried, M. D., of Harvard Medical School. 2d edition. 831 pages. 264 illustrations. Cloth. $6 net; half morocco, $7.50 net. Published in 1912 by W. B. Saunders Co., Philadelphia and London.

Anglo-Saxon Leechcraft. An historical sketch of early English medicine, prepared as a lecture memoranda for the 1912 meeting of the American Medical Association. Most artistically illustrated and printed. Published by Burroughs, Wellcome & Co. of London, and 35 W. 33d Street, New York.

Diseases of the Eye. By J. Herbert Parsons, M. B., F. R. C. S., of University College Hospital, London. 2d edition. 684 pages. Splendidly illustrated with colored plates. Cloth. Published in 1912 by P. Blakiston's Son & Co., Philadelphia.

Blood of the Fathers. A play in four acts. By G. Frank Lydston, M. D. Cloth, $1.25. Edition de luxe, $2.25. Published in 1911 by The Riverton Press, Chicago.

Baby's Teeth to the Twelfth Year. By Albert Westlake, D. D. S., of New York. 35 pages. Cloth. A clever little book of value to mothers and physicians. Published in 1912 by Mitchell Kennerley, New York.

Physiological Studies in Anaphylaxis. By W. H. Schultz, Ph.D., of the U. S. Hygienic Laboratory, Washington. Paper. 70 pages. Published in 1912 by the Government Printing Office, Washington.

Municipal Ordinances, Rules and Regulations Pertaining to Public Hygiene. Prepared under the direction of Surgeon-General Rupert Blue, U. S. P. H. and M. H. S. Paper. 244 pages. Published in 1912 by the Government Printing Office, Washington.

Massage and the Swedish Movements. By Kurre W. Ostrom, late of the Royal University of Upsala, Sweden. 7th edition. Cloth. 200 pages. Illustrated. $1.00 net. Published in 1912 by P. Blakiston's Son & Co., Philadelphia.

The Growth of Bone. By William Macewen, F. R. S. 210 pages. Illustrated. $2.25 net. Published in 1912 by The MacMillan Co., New York.

Diseases of the Skin. By L. Duncan Bulkley, M. D., of New York. Cloth. $2.00 net. Published in 1912 by Paul B. Hoeber, New York.

The Story of a Doctor's Telephone. By Ellen M. Firebaugh. A cleverly constructed novel written by a physician's wife, giving an insight into the life of the medical practitioner. Published in 1912 by The Roxburgh Publishing Co., Boston.

The Healthy Baby. By Roger H. Dennett, M. D., Instructor in Diseases of Children in the New York Post-Graduate Medical School. Cloth. 235 pages. $1.00 net. Published in 1912 by The Macmillan Co., New York.

Progressive Medicine. Edited by Hobart A. Hare, M. D., and Leighton F. Appleman, M. D., of Jefferson Medical College. Quarterly. Paper. 390 pages. $1.50. Annually, $6.00. Published by Lea & Febiger, Philadelphia.

Early Papers by W. J. and C. H. Mayo. Two octavo volumes of 550 pages each. Cloth. Illustrated. Per set, $10 net. Published in 1912 by W. B. Saunders Co., Philadelphia and London.

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